Chapter I

PRIMITIVE COMMUNISM AND KARNATAKA'S PREHISTORY

(40,000 BP-240 BC)

1. GEOLOGICAL AND ECOLOGICAL FEATURES [1]

The earth, its continents, rivers, soil, climate, flora and fauna evolved long before humankind had. The Indian land mass which has its own separate story of evolution is divided along three distinct geological zones:

1. The peninsula of the Deccan to the south of the Vindhyas
2. The great mountain system of the north, the Himalayas
3. The Indo-Gangetic alluvial plain of northern India extending from Punjab in the west to Bengal in the east.

Of these three segments, the first immediately concerns us since it is to this that Karnataka belongs, which also happens to be the most ancient of land masses that has formed on earth. Peninsular India, made up of a solid stable block of the earth's crust, belongs to what is called the azoic era (1500 million years old) or the era before life even in its most elementary form had emerged. The rock that forms peninsular India is the oldest and thus called archaean or Dharwadian, devoid on account of its age, of fossils.

[1] Palaeographic map of Gondwanaland in the middle and upper Cretaceous period.

During the mesozoic era (120-55 million years) which is further subdivided into the triassic, jurassic and cretaceous periods was also the age when reptiles evolved. Then peninsular India formed part of the land mass of Gondwanaland which was comprised of Africa, South America, Australia and Antarctica.

In the jurassic period, Gondwanaland split up commencing the process of what is called the continental drift. Peninsular India broke away from Africa and began to drift eastward along with Australia, the latter separating in the next period from the peninsular Indian land mass. This is borne out by the similarity of fauna of the Narmada valley with Arabia and Europe and the Indian east coast and Assam with that of Madagascar and South Africa, and the Savanna forests of the Deccan with that of the African east. In the words of Ramachandra Dikshitar, *"Geology accepts the Indo African land connection as a settled fact."*[2] Stupendous volcanic outbursts during the cretaceous period led to the formation of the crust of Gujarat, Maharashtra and Madhya Pradesh. These ancient volcanoes may be seen in Bijapur, Belgaum and Bidar districts too of Karnataka in the form of what is called Deccan Traps (from *trap* meaning *stair* or *step* in Swedish). These long since extinct volcanoes, after pouring out lava in profuse quantity, have as a result of weathering formed into flat topped hills, Bidar city itself being situated on one such trap.

The Deccan plateau so formed tilted towards the east creating the breathtaking Western Ghats. The range visible only from the coast gradually integrates with the table land in the east; so much so that approaching the coast from the east, the Ghats seem to take on an abrupt and precipitous dip almost into the Arabian Sea. This tilt of the Deccan face was also responsible for the easterly flow of all the major peninsular rivers and created its riverine systems. Thus while all these rivers originate in the Western Ghats so close to the sea, yet they meander eastward, wash the vast Deccan table land and then join the distant bay of Bengal in the east.

By the time of the Kainozoic era (the last 55 million years), the topographical features of Karnataka were formed, and the age of flowering plans, birds and mammals had commenced.

Topographically speaking, Karnataka may be divided into three major zones, each running parallel to the others in a north-south direction. To the extreme west is a 300 km long coastal strip with its shores lapped by the Arabian Sea, also called as Kanara from Portuguese times and as the *Karavali* in Kannada, varying in width from 15 kms to 40 kms to which the districts of Uttara Kannada and Dakshina Kannada belong. The Karavali has an average elevation of from 30 metres to 60 metres above sea level.

Parallel to it is the Western Ghats, about 500 kms in length, having a broad seaward face and only gently sloping on its leeward side, also called as the *Malnad* or *Sahyadri* in Kannada, composed of deep valleys, cascading waterfalls and steep mountainous hills. The Malnad runs through nine districts which include Belgaum, Uttara Kannada, Dharwad, Shimoga, Chickmagalur, Hassan, Dakshina Kannada, Kodagu (also called as Coorg by the British) and has its toes sticking into Mysore district.

Further east lies the broad expanse of plateau land also known as *Bayalusime* or *Mudalasime* in Kannada since ancient times and in more recent centuries as its *Maidan*. The Maidan itself may be divided on a geographical basis into a northern and a southern

2. Karnataka: Physiographic Regions.

half, the Tungabhadra river being the general line of demarcation. The North Maidan has a much lower elevation at from 450 metres to 760 metres, than the South and its plateau tends to be flatter. To it belong most of Belgaum and Dharwad districts and the entire area of the districts of Bijapur, Bellary, Raichur, Gulbarga and Bidar. The South Maidan with an elevation of 900 metres to 1,200 metres is an undulating plateau interspersed with hilly outcrops. A good deal of territory of Shimoga, Chickmagalur, Hasssan, Mysore and the entire districts of Chitradurga, Tumkur, Bangalore, Mandya and Kolar belong to it.

Except for a few streams which originate in the wooded regions amid granitic outcrops in the Maidan, all rivers of Karnataka originate in the Western Ghats. The rivers themselves may be divided into east and west flowing ones with the Kali alone, a bit undecided about its course in it upper reaches, takes a route confused and circuitous, before making up its mind and then rushing to discard itself in the Arabian Sea. The east flowing rivers form the biggest basins of Karnataka. At the northern tip the Manjra and Karanja flow in Bidar district making them a part of the Godavari basin and constituting 2.3% of the total area of 1.92 lakh sq kms of Karnataka. To the south and covering 59.06% of the area of the State and thereby its widest territory, is the grand Krishna basin. Its major tributaries are the Bhima, Ghataprabha, Malaprabha, Tungabhadra and Vedavati.

3. Karnataka: Relief.

4. Major rivers of Karnataka.

The Kaveri, moistening the southern part of the South Maidan, covers 17.87% of the State and includes the Yagachi, Hemavathi, Arkavathi, Shimsha and Kabini in its basin. The west flowing rivers, in contrast, have a short and swift course. They are always in a hurry to jump down from the Ghats and end up in the Arabian Sea, forming deltas and estuaries at the end of their journey. The Karavali, drained by these rivers, has a basin area of 13.8% of the State's total. The coast is innumerably sliced by these rivers, the more important of which are the Kali, Gangavali, Bedthi, Aghanashini, Sharavathi, Haladi, Sita, Chakra and Netravathi. Apart from these the North and South Pennar and Palar rivers drain 7.09% of Karnataka's area.

The Malnad receives the highest rainfall in Karnataka with an annual precipitation of from 4,000 mm to 8,000 mm. The Karavali comes next with an annual rainfall exceeding 3,000 mm. Confronted by the windward face of the Ghats, moisture laden winds blowing from the Arabian Sea are obstructed; and compelled to rise, they form a cloudy canopy over the coast, become heavy and cause cataclysmic showers. Hence the Malnad, and due to it, the coast, receive heavy rainfall making Agumbe in Shimoga district, India's southern Chirapunjee. Winds which have thus shed most of their moisture move eastwards to sprinkle the vast plains. The North and South Maidan thus form the rainshadow area. While the South Maidan receives from 2,000 mm to 460 mm of rainfall between its western and eastern extremities, the North Maidan depressed as it is in elevation and being the far from the diagonally running 'V' shaped coastline gets from 1,500 mm to 500 mm of rain in a year. If one rainy day is considered as having 2.5 mm or more rain in a 24 hour period, the Malnad and Karavali have a total of from 95 to 105 rainy days a year, and at the eastern extremes of the state along the Andhra Pradesh boundary, Bidar and Gulbarga have from 30 to 40 rainy days and Bellary and Chitradurga, in their eastern flanks, less than 20 rainy days in a year. While the Maidan generally displays semiarid conditions, the eastern strips of Bellary, Chitradurga and Tumkur districts display almost arid conditions, making them a part of the semidesert of neighbouring Anantapur, Kurnool and Cudappah districts of Andhra Pradesh, which is the core of the second desertified region in India after the Thar in Rajasthan.

Karnataka has four seasons. January-February being the cold months, the warm and hot months of summer spreading from March to May, the South West Monsoon also called the rainy season of the *Mungaru* covering the months from June to September and a second rainy season, the *Hingaru* caused by the North East Monsoon bringing clouds from the Bay of Bengal from October to December. During the rainy season the weather is generally warm or cool tending toward the latter especially in the months of the Hingaru.

The formation of soils is the result of the joint handiwork of geoclimatic and geobiological factors. While weathering breaks down rock masses into soil, physicochemical action of plants such as lichens, ferns, algae and mosses and animals such as worms and rodents enhances capillary action on the soil and helps its formation to maturity.

Of the four major types of Indian soils, the Indo-Gangetic alluvium is absent in Karnataka. It has red soil which is formed over the archaean basement and is the dominant type covering the South Maidan and parts of Dharward and Bellary districts. It is

5. Karnataka: Geology.

rich in potash, iron and alumina and generally poor in nitrogen, posphorus and humus. Black cotton soil formed from lava that once issued out of the Deccan Traps is the second most important soil type and is a characteristic feature of the North Maidan except Bidar and a part of Dharwad and Bellary districts. Black soils are extremely tenacious to moisture and become sticky when wet. They have a high degree of fertility generally and have high proportions of lime, magnesia, alumina, salt and potash. They are poor in posphorus and nitrogen. The reddish laterites are a feature typical of a moist climate. They have a low lime content. Laterite soils along with coastal alluvium are found in the Karavali and even Bidar district is covered by it. Based on these soil and climatic factors each of the regions of Karnataka may be further subdivided into agroclimatic zones.

All these factors contributed to the formation of the biosphere of Karnataka.

A narrow 5-10 km strip running at the edge of the Ghats emerged as an evergreen deciduous forest, a very rare kind of bioreserve. Sandwiching it from either side are two strips of semievergreen forests. Moist deciduous forests were formed at the fringe of the semievergreen forests and further eastwards, touching the Maidan are dry deciduous forests. In prehistoric times, the South Maidan could boast of dry deciduous forests and the North Maidan contained scrub and thorny forest laid with a profuse vegetation of grasses.

A number of wild animals roamed these forests; elephants keeping off evergreen forests and even quite a few species of ungulated animals finding it difficult to exist there due to the dense canopy. In fact the North Maidan with its scrub vegetation, occasional lakes and rolling grasslands characterised as the Savanna type (after East Africa) was the habitat on which hoofed animals such as deer, pig, oxen, buffalo, sheep and goat could thrive.

All these features then constituted the material environment of Karnataka. It is clear that the first evidence of humankind going back to 40,000 years in Karnataka depended on these ecological factors.

The North Maidan with its Savanna type of flora and fauna, had various fruit yielding trees and tubers. Its grassy plains were an attraction for the ungulates, reptiles and rodents. This was an invitation for carnivores feeding on them. The climate was warm and conducive. Quartzite was available.

Food was there. The raw material to procure them was also there. What more could the weary migrating hunter-gatherers have wished for? **In the North Maidan of Karnataka natural evolution had created an Eden for primitive humankind.**

2. LOCATING KARNATAKA IN PREHISTORY

Eastern Africa is considered as the core region where humankind evolved. The region has demonstrated a striking continuity of fossil finds of the late primates otherwise called anthropoid apes, such as the orangutan, gorilla and chimpanzee and the first Hominids (Hominids are a family of primates evolved from apelike ancestors of modern man). Further there has been a remarkable continuity of anthropogenesis that has been established under the family *Hominidae* basing on evidence collected by and large from Africa.[3]

The following table provided by Alexeev locates the process across time and facilitates our grasp of this transition.

Table of the Relation and Absolute Dates of the Stages in the Evolution of Ancient Man's Morphology and Culture

Historical Stage	Archaeological Stage	Evolutionary Stage	Absolute Dates (Thousand Years)
Primitive proto horde	Early stages of Lower Palaeolithic	*Australopithecus*	4,000,000- about 2,000,000
Early primitive horde	Later Stages of Lower Palaeolithic	*Pithecanthropus*	about 2,000,000 200,000
Developed primitive horde	Middle Palaeolithic	*Neanderthal* man	200,000- 40,000
Primitive community	Upper Palaeolithic, Mesolithic, Neolithic, and Early Bronze	Modern man *(Homo Sapiens)*	40,000-5,000

[4]

Peninsular India, to which Karnataka belongs, is the oldest extant land mass of India displaying striking resemblance in animal and plant forms with Madagascar off Africa's east coast. This only further confirms the unity of peninsular India with the African landmass at an early geological period. Yet, the peninsula has so far

6. Reconstruction of the skull of a Ramapithecus ape.

displayed remnants only of the early tailed primates. Traces of the later non-tailed primates or anthropoid apes from which man evolved have so far not been found in peninsular India. However the Siwalik ranges falling in the Himalayan foothills and its adjoining plains from northwestern Uttar Pradesh to Peshawar in Pakistan has thrown up evidence of the existence of higher primates such as the *Sivapithecus indicus* from Chinji in Pakistan, *Dryopithecus punjabicus* from Haritalynagar near Bilaspur in Punjab and *Semnopithecus asnoti* from the Salt Range bordering Chinji. Apart from these the fragment of the skull of *Ramapithecus punjabicus* was discovered at Haritalynagar.[5]

The *Ramapithecus* was considered to be among the last of the apes. But Ardeas Skybreak in her book *Of Primeval Steps and Future Leaps* caps the question when she says:

"Morgan, writing in 1971, assumes that the hominids diverged from the ancestral tree-dwelling apes a good 10 or 12 million years ago. In the past few years, however, new information has come to light which has led most scientists to believe that the divergence from the apes actually happened much more recently--a mere 4 or 5 million years ago. A reexamination of fossil dental remains once thought to be hominid from 5.5 million years ago has led to their being reclassified as ape remains (Ramapithecus, for instance, is no longer generally considered to be on the hominid line), most crucially, a new technique for "molecular dating" has been developed which makes it possible to roughly estimate the time when related species alive today would likely have diverged from a common ancestor. This technique, based on assessing the degree of relative similarity in the amino acid sequencing of typical protein chains of two or more related species, provides convincing evidence that our ancestors diverged **in the very recent past** *from the ancestral ape stock which also gave rise to the chimpanzees and gorillas. There is a strikingly small difference--less than 1% in the amino acid sequencing of average human protein molecules and their counterparts in chimpan-*

MA Edey, locating the significance of this find in the process of human evolution says: *"Leaky's Fort Ternan find locates* ***Ramapithecus*** *in East Africa at least two million years before it appeared in India--and, most important, in a country where Australopithecines [a man-like creature which appeared 4 to 5 million years ago and whose remains have been found in Ethiopia and East Africa and could make simple pebble tools] of great age are beginning to turn up. It seems most sensible to continue to argue the case for Africa as the breeding ground of man. Ramapithecus populations may well have radiated out from Africa--to India and perhaps to other places--over a period of several million years. But this is no guarantee that they went on to produce hominidal descendants in those places. Until fossil evidence confirms that they did, it seems more logical to assume that early hominid evolution was confined to the place where fossils are: Africa."* [8]

7. The east African home of humankind.

VP Alexeev also subscribes to a similar stand point. He says: *"The homeland of humankind is often put at where the most finds are made.... The rich discoveries in human palaeontology made in Africa over the past 20 years, have given this region* *the main role. But the Siwalik Range in Northern India, known to palaentologists since the last century as the Eldorado of fossils, continues to yield finds of forms close to hominids, though not as in the same quantity as Africa. That has given the Asian hypothesis new life, and new supporters. I have expressed myself several times in the literature in support of the hypothesis of an African home of humankind, because of the exceptional nature of the African finds, which illustrate all the stages of human evolution, and the very great similarity of man precisely to the African anthropoid apes (an argument already put forward by Darwin for an African homeland)."* [9]

We might from all angles therefore consider the thesis of an East African homeland for humankind as valid.

It is however the Siwaliks that again throws up earliest evidence of humankind in India. While no fossil remains have yet been traced, stone tools, choppers and crude scrapers have been traced, the antiquity of which is dated from 5,00,000 years to 3,00,000 years Before Present (BP).

8. Major sites and migratory routes of Homo Erectus which became possible because of the discovery of fire. This must have caused, theoretically, the first inhabiting of India.

One lakh years after the Siwalik discoveries come the finds at Atirampakkam in Chingleput district of Tamil Nadu of double edged cutting tools which are dated as 2,00,000 years old.

But after this there is a gap of 1.5 lakh years in peninsular India before any substantial discoveries of palaeolithic (belonging to the old stone age which is the earliest and longest period of human development) humankind are made. It is only from this period, starting about 40,000 years ago that a continuity of human *social evolution* is obtained in India in general and Karnataka in particular. Thus we may say that the prehistory of Karnataka commences with the period of palaeolithism.

But before we start off with our discussion of Karnataka prehistory, it would be useful to make some observations regarding human society of that time.

Indian and its peninsular prehistory is bound to be reinterpreted based on more meticulous excavations in the Siwalik hills and the habitation region around Atirampakkam. These finds will locate the role of the Indian land mass in the eastward movement of human life from the African homeland into the Melanesian, Polynesian and Australian regions at the time of the lower and middle palaeolithic stages itself when the species Homo Sapien was yet to evolve. It could, in the process demonstrate the contribution of the Indian subcontinent to the development of human culture during this stage of transition and movement eastwards from India. But until these substantive discoveries are made and the line of continuity established within the Indian land mass between not only the northern Siwalik finds and the southern Atirampakkam finds but also within these regions traversing the lower, middle and upper palaeolithic stages, our comprehension of our past will remain hampered and

9. Corridors of migration into India and Indochina.

limited to what perceptive best we can make of the existing material starting from the lower palaeolithic period, that is, from about 40,000 years ago.

This starting point in the study of Karnataka's perhistory only establishes well the following facts:

- That Karnataka's (and India's too, for that matter) prehistory commences with the emergence of Homo Sapiens or modern man.
- Going by the enduring Engelsian classification this was the period of the middle stage of savagery. Savagery itself was described by Engels as: *"...the period in which the appropriation of natural products, ready for use, predominated; the things produced by man were, in the main, instruments that facilitated this appropriation."* [10]
- Engels' grasp of the large scale migration of the period, unprecedented in human prehistory till then, and the factors affecting it remain valid more than a century after he made them. He says that the middle stage of savagery *"begins with the utilization of fish (under which head we also include crabs, shellfish and other aquatic animals) for food and with the employment of fire. These two are complimentary, since fish food becomes fully available only with the use of fire. This new food, however, made man independent of climate and locality. By following the rivers and coasts man was able even in this savage state, to spread over the greater part of the earth's surface. The crude unpolished stone implements of the earlier Stone Age--the so called palaeolithic--which belong wholly, or predominantly, to this period, and are scattered over all the continents, are evidence of these migrations. The newly-occupied territories as well as the unceasingly active urge for discovery, linked with their command of the art of producing fire by friction, made available new food stuffs, such as farinaceous roots and tubers, baked in hot ashes or in baking pits (ground ovens), and game, which was occasionally added to the diet after the invention of the first weapons--the club and the spear."* [11]

Thus it was exactly at this point in the development of humans and the peopling of peninsular India by migratory movements of communities in the stage of palaeolithism or of food gathering-hunting that we arrive at evidences from Karnataka.

3. FOOD GATHERING-HUNTING: PALAEOLITHIC AND MESOLITHIC PERIODS
(40,000 BP-2500 BC)

From continent to continent and from region to region within a continent the periodisation of prehistory undergoes distinct changes. Since all prehistoric (and for that matter historic) periodisation is undertaken on the qualitative level of the instruments of production, each stage of prehistoric development into palaeolithic (old stone age), mesolithic (middle stone age), neolithic (new stone age), copper, bronze and iron ages describes the level of development of the human social formation. A complex of environmental and social factors decide the transition from one stage of prehistory to the other; and they also at times cause an intermingling of stages. While submitting the culture region of South Indian prehistory to periodisation, we may identify the following stages:

Table Showing the Periodisation of South Indian Prehistory

Tool culture	Date	Mode of production in South India with particular reference to Karnataka
I Palaeolithic		
Early	2,00,000 BP- 40,000 BP	Primitive communism with food gathering-hunting
Middle	40,000 BP- 19,000 BP	--ditto--
Upper	19,000 BP- 10,000 BP	--ditto--
II Mesolithic	10,000-BP- 2500 BC	Primitive communism with food gathering-hunting
III Neolithic-Chalcolithic	2500 BC- 1200 BC	Primitive communism with pastoralism-primitive agriculture
IV Iron age	1200 BC- 240 BC	Primitive communism with pastoralism-primitive agriculture under tribal oligarchic rule

In periodising Karnataka in particular one finds that the early palaeolithic period was characterised by tools made of quartzite, while the middle palaeolithic saw the use of agate, jasper and chalcedony.[13]

Marking the difference between the middle and upper palaeolithic stages, Bridget and Raymond Allchin say: *"The basic technological innovation of the Upper Palaeolithic is the method of producing parallel-sided blades from a carefully prepared core, a specialised development of the unidirectional type of Middle Palaeolithic. One good core of this kind, once prepared, can yield many parallel sided blades with little or no further preparation.... The technique of making parallel sided blades is an essential basic element of all Upper Palaeolithic industries of the subcontinent...."*[14]

It is therefore generally possible that it was the last stage of palaeolithism which consumed about 9,000 years before transforming into the mesolithic period, that the last stage of savagery, that is, of food gathering-hunting was inaugurated. After an exclusive mesolithic stage, the neolithic age commences. This in a short time witnesses the simultaneous transition to the copper age. Thus this period stretching from 2500 BC to 1200 BC is called the chalcolithic period (*chalcos* = copper, *lithic* = of stone) where there is a combination of new stone age tools with that of copper use. Karnataka also does not experience any exclusive bronze age. It moves from the chalcolithic age into the iron age and from there into the stage of history proper.

Thus while the overall pattern of prehistoric development is in keeping with the general pattern, the Karnataka land mass displays its own specificities in this regard.

In the absence of any archaeological evidence of man before 40,000 years in Karnataka, we presume that Karnataka was peopled as the result of a protracted migratory movement.

The evidence of palaeolithic sites in Karnataka falls along a pattern which describes South India as a whole. All palaeolithic sites discovered so far in South India are concentrated in the districts of Dharwad, Belgaum, Bijapur, Gulbarga, Raichur and Bellary of Karnataka; adjoining plains of Mahaboobnagar and Kurnool districts, the eastern Nallamala hills, Nalgonda, Chittur and Nellore districts of Andhra Pradesh and the adjoining northern districts of North Arcot and Chingleput of Tamil Nadu. While the Krishna and its tributaries are home for almost all the sites in Karnataka and Andhra Pradesh, the Pennar basin is the culture region for Tamil Nadu.[15]

Within this region, there is again an epicentre falling along the Tungabhadra-Krishna rivers of Karnataka and Andhra Pradesh. More than 100 such sites have so far been identified in North Karnataka and 50 sites in Andhra Pradesh.

It was only after another several thousand years of the existence of these sites in this core region that one notices a gradual spread of palaeolithic sites to the South Maidan region of Karnataka in the districts of Shimoga, Chitradurga, Chickmagalur, Tumkur and Mysore.[16] Among these innumerable sites, systematic excavation has been undertaken in the Hunsgi-Baichbal valley of Gulbarga district.

Among the most important factors contributing to this settlement pattern are the availability of raw material for tool making, the proximity of perennial water source

10. Map of the middle Krishna basin showing the distribution of early palaeolithic sites.

11. Early and middle palaeolithic sites in southern Karnataka.

for drinking and fishing, the availability of animals, in particular, herbivores (animals that feed on grass and leaves) which make easier prey and the existence of a plant diversity which can yield food all round the year.

The availability of schists, haematite, quartzite, chert, jasper and dolerite have contributed to the making of tools.

Of the tools found are handaxes, cleavers, knives and bifacial points. With the further advancement of the upper palaeolithic period, scrapers form a dominant portion of the tools, followed by points, borers and combination tools. In this later stage 90% of the tools were made by the flaking technique. RV Joshi says that most tools during this period were *"difficult to haft for making arrows"*.[17] The tools of this period are generally classed as Acheulian, named after the stone age culture which existed in France from 2,30,000 to 2,00,000 years ago in St Acheul, France.

Although the level of palaeolithism has been the same in north India and the south, there is a distinction in the main type of tool that is found during this period between the two regions. While the chopper-type pebble tools are found in the north, the Acheulian hand axes dominate in the south. Archaeologists are of the opinion that both these tool types were used to serve the same end and hence this only goes to show the distinctness of the culture type that evolved in the south.[18]

Fossils of the ox, buffalo, pig, deer, antelope, rhinoceros, molluscan shells, antler, elephant and hippopotamus have been found in different sites of Karnataka. The neighbouring Kurnool caves revealed fossils of blackbuck, chinkara, sambar, chital, barking deer, mouse deer, wild boar, black naped hare, procupine, pangolin, monitor lizard and crocodile in addition to the animals found in the Karnataka sites.[19]

Apart from these animal remains, fossils of various berries, seeds, leafy greens, tubers, tamarind and ber fruit have also been found at these sites.

GL Badam who has made a study of the palaeontology of the upper Krishna valley which includes its tributaries such as the Malaprabha, Ghataprabha, Tungabhadra, Bhima, Ghod and Hunsgi rivers, dates all these floral and faunal remains to the period 30,000 to 39,000 years BP.[20]

Detailed investigations by K Paddayya at Hunsgi covering a seven year period led him to identify 65 sites in the valley. Further, another 40 sites were located in the Ghataprabha valley in Gokak of Belgaum district. RS Pappu, K Paddayya and TV Shivarudrappa conclude that the *"region was characterised by semi-arid monsoonal climate with suitable physiographic setting in the form of gentle plateau and broad pediments cut by shallow broad bed load streams and sparsely forested savanna type of vegetation in the lower reaches of the river valleys...."*[21]

KV Paddayya's work on the Hunsgi valley has its own special place in the understanding of palaeolithic Karnataka. Hunsgi is an oval shaped valley running 15 kms north-south and 10 kms east-west in Gulbarga district. It is surrounded by elevated plateaus. The Hunsgi stream with a few tributaries of its own in the form of hill torrents provides the main drainage for the valley before joining the Krishna river. These torrents normally retain water in the monsoon months of July-October; but the Hunsgi itself has a perennial flow. Of the 20 Acheulian localities that Paddayya mentions, three are factory sites, others are secondary spreads and habitational sites. Most sites are on the floor of the valley and generally close to the water courses. The sporadic occurrence of artefacts on the surrounding hill slopes and rock hollows only suggests that the Acheulian folk used to roam around in that area, occasionally taking shelter in the hollows. Three micro zones of vegetation were identified: a gallery forest along the stream courses, xerophytic vegetation (plants which have adapted to conditions of scanty rainfall and excess salts in the soil) typical of semi-arid tracts in the valley floor and the same type of xerophytic vegetation in the tableland. There were interspersed marshlands. The totality of this type may be identified with the Savannah type of East Africa, a region, let us be reminded had adjoined peninsular India in a bygone geological age.[22]

Paddayya's detailed investigations at Hunsgi have led him to observe a climatic pattern in the life of the palaeolithic peoples of the valley: *"...the annual activity-cycle of the Acheulian occupants of the area consisted of two principal seasonal strategies. In the dry season animal foods (especially large game hunting) were the main source of subsistence; the Acheulian population was probably forced to come together in the central part of the valley (the area around the present-day village of Hunsgi), as the spring-fed channel flowing the Hunsgi stream would be the only source of drinking water in the entire valley.... In the ensuing wet season the population aggregate would split itself into small groups and spread all over the valley, since now both plant foods and drinking water would be freely available everywhere."* [23]

From the tools used, the plant and animal remains found, it is evident that the palaeolithic people of Karnataka were at the stage of food gathering-hunting.

Stone tools could have been used for digging up tubers, edible roots and open burrows of rodents and other small animals. The stone tools appear to have been used more for flaying open the carcass of the hunted animals, perhaps the remains of the food of carnivores, and scraping out the meat. While the animal remains speak of a diverse faunal diet, it would be wrong to exaggerate the regularity of an animal diet in the life of these palaeolithic humans. Under a hot and humid climate which had a relatively moderate degree of precipitation a carcass would often decompose even before it could be completely used. As a result *"it was this impossibility of preserving meat that apparently led to a constant, purposive search for food and hunting practically every day, and at the same time encouraged an active mode of life."* [24] While foraging remained the mainstay in the food of these people, they took to scavenging and hunting to supplement a proteinaceous diet.[25]

Paddayya's reconstruction of the behaviour of the palaeolithic people of Hunsgi valley speaks a lot of the level of their culture and the formation of their knowledge base. The palaeolithic people of Hunsgi had obviously moved from the level of registering empirical/apparent knowledge.

Discussing about the logical in the sphere of human consciousness of primitive man, Alexeev says: *"There is still an immense field of extra-economic phenomena that the primitive man came up against, and on which he depended no less than on the state of food resources; that is the seasonal rhythms and climatic phenomena. It is* *impossible to foresee natural calamities ... but it is possible to be clearly aware of the rhythm of seasonal processes and to adapt to them. After the dry season follows the rainy season, after day comes night--these are empirical observations, awareness of the inevitability of this succession, and of its strict recurrence, however, is obviously already a generalisation of empirical experience; the observation itself and its generalisation belong to the different spheres of consciousness.... In the cases of hunting and food gathering the generalisation promotes a more regular supply of food, in the case of observations and taking stock of the rhythm and character of natural processes, it makes it possible to select and prepare shelters from bad weather, to choose more convenient places for campsites and night halts, i.e., to realise the whole life cycle."* [26]

There was a diversity in the sites of habitation of these palaeolithic peoples. Bridget and Raymond Allchin state that *"...regular living sites were established on the banks of rivers, in the open and in rock shelters...."* [27]

Thus it could be correct to expect several habitational sites in a given culture-complex zone as Paddayya has rightly done, and look for the seasonal alteration of these sites.

The production of tools was undertaken during this period by what S Nagaraju sums up as *"the stone-hammer, cylindrical-hammer, feather edge chippings and step flaking for trimming the edges."* [28]

The innumerable factory sites uncovered at Hunsgi, Gokak, Nittur in Bellary district, etc, draw up a picture which demonstrates its distribution across a wide population of the concerned tribe.[29]

The level of generalised knowledge, or in other words, abstract thought, and the degree of intra tribal coordination and patterned life only compels us to believe that the upper palaeoliths of Karnataka had already a developed language of their own. Without the adequate exchange of ideas, of which language is the means, this level of life would not have been possible.

It is important to note that we have very little knowledge of the art of these people. From the level of their consciousness it is to be presumed that they had developed forms of art generally true of communities in the late stage of food gathering-hunting.

It is significant to note that we are left with no skeletal remains whatsoever of these late palaeolithic people. Their mode of disposing the dead, (and we presume some such mode could have emerged by this stage given the development of a full fledged language and attendant to it, a sense of social belonging) could have worked as a hindrance in obtaining such remains. Such a method should have existed (perhaps they burnt the dead) since among the heaps of animal bones again there is no trace of human skeletal remains. We could have otherwise learned more of the racial composition of these fellow Homo Sapiens that peopled Karnataka.

The mesolithic or middle stone age commenced with the end of the palaeolithic. It spanned a period of about 6,000 years from 10,000 BP to 2500 BC.

In this phase which was a continuation of the food gathering- hunting stage, or to put it in Engels' terms, encompassed the final stage of savagery, there was an advancement in the instruments of production.

It is important to note that there is a stratigraphic continuity in the sites of the mesolithic period from that of the palaeolithic. RV Pandit says, *"Whenever undisturbed river sections are available, as in the Krishna basin, particularly in the major tributaries of the Krishna, Ghataprabha and the Malaprabha, the deposits containing the Middle Stone Age overlie those containing Early Stone Age."* [30]

This overlapping of sites across the two stone age periods only indicates the continuity in the transformation of the earlier mode of existence. The start of the Holocene epoch (i.e., from the commencement of the end of the last major ice age 10,000 years ago) introduced several environmental changes and thus affected the ecology of the region. One could, with the decrease in rainfall expect a decrease in the marsh lands. The raw material used for the manufacture of stone tools changed as much as did the size and type of tools.[31] Significant among the changes was perhaps the development of the bow and arrow which must have further stabilised their intake of animal food.[32]

While extensive evidence of the mesolithic period is obtained in North Karnataka not much evidence is found from the southern region of the state.[33]

This only reveals to us that the old demographic pattern was repeated except for some finds in the Dakshina Kannada coastal tract of Karnataka for the first time.[34]

The mesolithic period in Karnataka remains unspectacular and serves as an important transition period to the next qualitatively higher neolithic-chalcolithic stage of pastoralism-primitive agriculture which Engels chooses to classify as the stage of barbarism.

4. PASTORALISM-PRIMITIVE AGRICULTURE: NEOLITHIC, CHALCOLITHIC AND IRON AGES (2500 BC-240 BC)

A. Spread of the Neolithic and Chalcolithic

Over 150 neolithic-chalcolithic sites have been discovered in South India so far. Most of these occur in Karnataka with the rest in Andhra Pradesh and Tamil Nadu. The nuclear zone of the chalcolithic period overlaps that of the earlier palaeolithic-mesolithic periods. The continuity is striking in that the upper strata of palaeolithic sites have yielded neolithic-chalcolithic finds, that quite often archaeologists are placed in a maze of intertwining periods during their excavations. K Paddayya says that Gulbarga-Raichur-Bellary-Kurnool-Mahboobnagar region *"has not only the largest known concentration of Neolithic sites [in South India] but has given us the earliest known sites like Utnur, Piklihal and Kodekal so much so that most archaeologists have come to regard this zone as the nuclear area of south Indian Neolithic complex."*[35] In addition one finds several chalcolithic sites in the adjoining districts of Belgaum, Bijapur and Chitradurga districts, all principally part of the Bhima-Krishna-Tungabhadra doabs of Karnataka.

While this has been the area of concentration, there has also been a furter dispersal of human habitation during the chalcolithic period when compared to the earlier palaeolithic-mesolithic period of gathering-grubbing-scavenging-hunting. One notices a general upstream migratory movement deeper into the districts of Dharwad and Shimoga, evidence of habitation in Honnavara and Gokarna on the Uttara Kannada coast, and a general movement from the earlier palaeolithic T Narasipura sites in Mysore district in the Kaveri basin into neighbouring Bangalore and Kolar districts. The chalcolithic period, with the marked development of stone tools and the use of copper resulted in the increased peopling of Karnataka. Given the level of development of the instruments of production and the new mode of life that it ushered in, one observes a pattern in this dispersal whereby human habitation covered all the grassland, the undulating semi-deciduous plateau lands with patches of grass in between and the river beds which, in addition to affording these features in their neighbouring environs, also provided for favourable stretches of alluvial deposits. A nearly 200 km wide strip running north-south, of the Malnad, generally remained out of the reach of the neolithic peoples. The exception to this have been the finds of neolithic sites in Nilaskal, Hosanagara and Yedegudde in the thickly forested Malnad region of Shimoga district.[36]

Among the most important sites that have been excavated and have yielded promising evidence telling us of the story of this period have been Sanganakallu and Tekkalakota in Bellary, Maski and Piklihal in Raichur, Hallur in Dharwad, the Surpur-Shahpur doab in Gulbarga and Brahmagiri in Chitradurga.

12. Some important towns of the mature Sindhu period.

The transition of Karnataka society to the age of neolithism-chalcolithism took place at the time of the rise of Harappan civilisation, i.e., in 2500 BC. Harappan civilisation itself, it must be recognised, with its innumerable towns such as Lothal, Surkotada, Allahdino, Mohenjodaro, Chanhudaro, Balakot and Harappa and more than 260 sites spread over Gujarat, Rajasthan, Punjab, Harayana and Jammu on the eastern flank of the Sindhu was a vast complex that had emerged on the basis of a copper-bronze culture. Asko Parpola's researches and those by other scholars have led to the now almost established fact that Harappan civilisation between 2500-1800 BC was not just pre-Aryan but also non-Aryan, in that its authors spoke a Protodravidian tongue.[37]

The major nuclear region of chalcolithism outside the Harappan zone in India at that time was the Krishna-Tungabhadra doab area. While it is logical to seek exchanges between the chalcolithic societies of the Indus valley and the southern nuclear complex, one must always remember that **Harappan chalcolithism had created a class society, while that of the Krishna valley was still pre-class.** The presence of neolithic setlements in concentrated numbers next to the areas of gold mines such as Maski in Raichur and Bangarpet in Kolar has led a few archaeologists to consider the possibility of mining and trade in mined gold, perhaps with the southern Harappan town of Lothal in Gujarat.

"According to SR Rao, Lothal as well as the Indus Valley cities received gold from the Kolar and Hatti gold mines in Karnataka. The occurrence of typical Harappan products such as disc-beads of white stealite at Maski, Piklihal, Tekkalakota, Utnur (2300 BC), and flat copper celts at Tekkalakota (1700 BC) and Hallur, all situated within the gold-producing region of Deccan, assumes great significance in the present context. Recently some neolithic sites have been discovered in the ancient gold-working region around Kolar in Karnataka and Hosur in Tamil Nadu." [38]

But since this premise is yet to be convincingly substantiated with more cross checkable material evidence from the Lothal region, this question, highly significant, remains to be completely answered by archaeologists of the future.

What is more important for the time being, is to consider as Sankalia did, that the Raichur-Bellary region which has been the focus of the chalcolithic age in southern India stimulated in its wake the development of similar cultures in the remaining regions of Karnataka, Andhra Pradesh and Tamil Nadu.

Bridget and Raymond Allchin perceive three phases within the neolithic-chalcolithic age, while Sankalia prefers to visualise two. Based on radiocarbon dating the former say that the first phase starting 3000 BC came to an end by 2000 BC. These dates are taken basically from the cattle pens and illustrate relative nomadism among the habitants. It was a phase when neolithic tools alone were used. The second phase is fixed from 2100 BC to 1700 BC and reflects relatively stable settlements on the slopes and tops of granite hills. Metal objects made of copper and bronze have been found in this phase. The third phase commencing from 1700 BC winds up by 1200 BC with the production of antennae swords and daggers of copper.[39]

i) New Mode of Existence

The entry of society to the period of neolithism-chalcolithism ushered in a change in the very mode of human existence differing in every sense drastically from the old. Basing on Morgan's classification Engels calls this as the period of barbarism. He writes: *"The characteristic feature of the period of barbarism is the domestication and breeding of animals and the cultivation of plants."* [40]

In other words, society advanced from the stage of food gathering-hunting to pastoralism-primitive agriculture. The chief lines on which this change was effected was by the transition of hunting to animal breeding and food gathering to agriculture. Based on the division of work that already existed in the palaeolithic period between the sexes, whereby men tended to hunting and women to food gathering, it follows that the transition to pastoralism was effected by the male and agriculture was discovered by the female.

Radiocarbon dating of the first phase of neolithic settlements only confirms what Engels pointed out as an important feature of the transition in the East.[41] All radiocarbon dates tell us that the first phase of the chalcolithic period, i.e., neolithism proper, speak of a pastoral economy, while it is only with the onset of the second phase that evidence of agriculture begins. Thus it maybe said that **animal breeding, in our case ox rearing, preceded the transition to agriculture.** It must not be overlooked that this transition in the two realms was possible only after accumulation of a rich knowledge base in both the domains.

13. South India: Distribution of ashmounds in relation to neolithic and megalithic sites.

14. Distribution of ashmounds and main neolithic sites investigated by FR Allchin.

Though we have not got any direct evidence yet, we may safely presume that the domestication of cattle in the Krishna-Tungabhadra doab was preceded by the domestication of the dog. The Indian pariah-dog and particularly the one that the Kurubas of the area even today possess, was a local species of the wolf. Wolves often hung around human dwellings scavenging on bones and other leftovers. Generally mesolithic hunters had already domesticated the dog. This has led archaeologists to

15. a) Unexposed ashmound from Wandalli.
b) Exposed section of ashmound from Gaudur.

conclude that it was not just the best friend of mankind but also the oldest. The domestication of the dog greatly enhanced humankind's capacity to hunt and it was possibly out of this abundance that calf of ox and/or the kid of sheep or goat came to be tended instead of being butchered outright.[42]

Raymond Allchin's *Neolithic Cattle-keepers of South India, A Study of the Deccan Ashmounds* is a comprehensive study of the subject of the pastoral past of this period. He has identified several dozen ash mounds which were nothing but mounds of burnt cowdung from cattle pens estimated to contain from 600 to 1,000 animals in the nuclear area of the Tungabhadra-Krishna doab. **Ashmounds stand out as a unique feature of the transition to pastoralism in the region.** Several dozen ashmounds dot the skyline in the districts of Belgaum, Bijapur, Gulbarga, Raichur, Bellary and Chitradurga of Karnataka in addition to those of adjoining Kurnool, Mahaboobnagar and Anantapur of Andhra Pradesh.[43] In Bellary he investigated 14 such ashmounds, in Raichur he studied 13 and in Gulbarga he researched on 8.

In the immediate environs of these ashmounds he uncovered neolithic tools. Pastoralism in the first phase of the neolithic period was *"at least partly nomadic"*, but with the start of the second phase, that of chalcolithism proper, the nomadic nature yielded to a by and large settled form and also at the same time human life displayed all manifestations of agriculture. Some of these sites such as Kupgal in Bellary or Piklihal in Raichur or Utnur in neighbouring Mahaboobnagar district where Allchin identified ashmounds have also yielded a rich store of atrefacts that speak of settled agriculture.[44]

What is significant about these ashmounds is that this phenomenon is **exclusive** to the nuclear region mentioned. Apart from this region Tirunalveli district of Tamil Nadu has reported a few of them apart from a few in Payampalli in Chittur district of Andhra Pradesh. A few ashmounds have also been spotted in T Narasipur taluk of Mysore district. But all these ashmounds outside the nuclear zone belong to a much later period, the megalithic period of the iron age.[45] Thus the phenomenon of ashmounds by being unique to this nuclear region only demonstrates that **the transition to pastoralism and thus neolithism took place on a pre-neolithic indigenous local base.**

Allchin is of the opinion that the domestication of the buffalo had not yet taken place at the time of the ashmounds. Further, we get evidence of the domestication of sheep, goats and pigs. MS Randhawa observes: *"It is the animals that live in herds that are more amenable to domestication. The herd is usually led by a leader whom the herd follows. If the leader is captured, the rest of the herd can easily be caught. Sheep, goats, cattle and pigs, which are the main domestic animals, come under this category and no wonder they were the first to be domesticated."* [46]

One may note that already in the period of upper palaeolithism and mesolithism humankind tended to rely more and more on the ungulated and herbivorous animals since tracking and hunting was easier as they lived in herds and also because of the fact that they were least liable to prove dangerous for the hunter.

With the start of the chalcolithic period we come across evidence of agriculture. Just as with the case of herd animals *"similar among plants, it is the grasses which tend to grow densely, and are most amenable to control by man. Most of our cereals,* *e.g., wheat, barley, oats and rice are grasses."*[47] Of these cereals chalcolithic Karnataka provides us with several samples of rice. In addition we have been able to obtain a millet such as ragi. Millets is a group name for a number of cereals known as coarse grain. In other words millets, in their natural state are nothing but grasses which grow in arid and semi-arid areas and are also called *warm weather grasses.* Most millets are of short duration from seeding to harvest and require low nutritional inputs to flourish.[48]

16. Geographical distribution of records of millets in the Indian subcontinent. The earliest record of sorghum (jowar) is from Inamgaon, Maharashtra; that of finger millet or elusine (ragi) from Hallur, Karnataka and of pearl millet (bajra) from Ahar, Rajasthan.

MS Nagaraja Rao's excavation in Hallur of Hirekerur taluk in the southern tip of Dharwad district led him to the discovery of ragi (*Elusine coracana*). It was dated by C14 method at 1800 BC. This, wrote Vishnu Mitre, a palaeobotanist, was *"...the first archaeological record so far known by the prehistoric people. It is all the more important that it has been discovered from the Indian neolithic thus making it one of the earliest crops cultivated by the Neolithic folk...."*[49]

Vishnu Mitre and Randhawa, both tell us that ragi is originally an African plant. *Elusine africana* and *Elusine coracana* are found side by side in Uganda, the former being the wild species from which the latter hybrid was cultivated.[50]

17. Geographical distribution of rice in the Indian subcontinent.

Thus it is clear that ragi could not have been cultivated originally in India from its wild state since wild ragi is not available in the country. Thus ragi which is grown primarily in Karnataka, Andhra Pradesh, Tamil Nadu and Maharashtra and to an extent in the Himalayan foothills of western Uttar Pradesh and the Kulu valley of Himachal Pradesh has dispersed as a major food crop only after its journey from East Africa, perhaps Uganda.

This journey of ragi at such an early date, i.e., almost at the beginning of the agricultural age raises many important questions. Most important of all, it speaks of a link between East Africa and neolithism in Karnataka. That this link was apparently mediated through southern Harappan settlements of Gujarat is apparent; what with the discovery of ragi at Surkotada in the Kutch.[51]

The importance of ragi as one of the two principal food crops initiating (along with rice) Karnataka's transition to the chalcolithic is borne out better by the fact that samples of ragi have also been found from sites in the traditional non-ragi areas such as from Sanganakallu in Raichur and Tekkalakota in Bellary district.

Apart from ragi, rice was the other major crop that has been found in the chalcolithic sites of Karnataka although it might not have played as important a role in the diet of the people as ragi did at that time. It is generally felt that the cultivation of rice originated in India, Burma or Indochina. India has 4,000 varieties of rice. The earliest evidence of its cultivation is from Lothal in Gujarat dated at 2400 BC. On account of its heavy yields, rice could support a far denser population than any other cereal, and consequently population growth and density were much more significant in areas where it was grown.[52]

Rice discovered at Tekkalakota was dated at 1780 BC and that found at Hallur placed at 1100 BC.

The third important crop that was cultivated then was horsegram. Hallur excavations place horse gram at 1780 BC. i.e., just 20 years after the date of ragi. Horsegram has been found at Sanganakallu and Tekkalakota too. Horsegram recorded at Hallur makes it the **first** material evidence of the cultivation of this crop in India.

The fourth crop that has been found is greengram.

The major change in the stone tools of the chalcolithic people over that of their palaeolithic ancestors has been the **grinding** given to these tools. New materials such as basalt and chalcedony were used for fashioning tools. Microlithic tools have also been discovered from this period. But the **most important** of the new tools has been the stone sickle. It is with the sickle and perhaps the digging stick or hoe that agriculture was carried out by the people of this period.

Podu or shifting cultivation was generally practised, the common term in Protodravidian for primitive agriculture derived from *podu* which means *to put* as in Tamil; of which, *haku* in Kannada is only a modified equivalent. The low water requirement (except rice) and hardiness of these first crops capable of growing even under extremely low rainfall and poor soil makes them highly adaptable and suitable to the needs of these first agriculturists. Vishnu Mitre and Savithri Ravi do not rule out *"a primitive type of dry land farming apart from shifting cultivation."* [53]

Bridget and Raymond Allchin give us a good picture of rice cultivation of that time. *"...terracing of hills was an important feature of the settlements of the neolithic period, and it is probable that it was increasingly employed for making tiny fields for growing crops. Such terraces, behind a retaining wall, would incidentally help conserve both soil and moisture after the Monsoon."* [54]

The development of pastoralism and agriculture thus altered the very mode of existence. While ox, sheep, goats and pigs greatly enhanced the meat and thus protein intake, providing milk as well as wool; agriculture provided the diet with carbohydrates and proteins. The stalks of these crops served as good fodder for cattle. It is interesting to note that **the burning of cowdung collected in the cattlepens resulting in the ashmounds came to an end** with the commencement of the second phase of the chalcolithic period. It is quite probable that **the use of dung as a fertilising agent had already been discovered, thereby closing the gap between agriculture and cattle rearing** in the second phase of the chalcolithic period. But for this knowledge near permanent settlements could not have evolved on a primitive agricultural basis. Thus it is no coincidence that **the commencement of house construction and a regular settled life coincides with the fading away of the ashmounds.**

All these added up, the new mode of life proved to be far more life-sustaining. For the woman, in particular, the discovery of agriculture came as a blessing. Compelled to a life of nomadism and constantly on food gathering expeditions till then, by developing agriculture she could now relax to a settled life easing the burden of child rearing to a great extent.

ii) Artifacts of the New Mode

The new life of pastoralism-primitive agriculture enriched the material life of the people. New artifacts had to be created to match the requirements that the new mode of life had generated. Pottery was invented. Engels provides us with a picture of how this was achieved. He says that barbarism *"Dates from the introduction of pottery. This latter had its origin, demostrably in many cases and probably everywhere, in the coating of baskets or wooden vessels with clay in order to render them fire-proof; whereby it was soon discovered that moulded clay also served the purpose without the inner vessel."* [55] Pots were used not only as containers to cook, but the larger ones were used to store grain. The saddle quern emerged.[56] Mullers and pounders came into use. Thus cooking which till then was not a very important part in the life of the palaeolithic people now became a major time-consuming task. The time taken to eat was drastically reduced. *"Preparations, both dry and liquid--must have played a regular part"* says HD Sankalia.[57] This is reflected in the two types of standard vessels--the flat and cupped bowls found in all chalcolithic settlements.

Basket making, mat-weaving, spinning and weaving were also developed.

A prominent change during this period was in the settlement. C Krishnamurthy says *"...there were three phases of settlements of Neolithic people. In the earlier phase they inhabited the rock shelters and flat terraces on the hill tops which gave them enough protection and enabled them to command a larger area from the top of the hill as at Tekkalakota, Banahalli [in Kolar district].... In the second phase although they continued to live in rock shelters, they also came down to the foot of the hills and plains. While in the third they preferred the river banks as at Hallur, T Narasipura and Hemmige."* [58]

The construction of houses which were at this time basically circular shaped, the building of walls, the plastering of the floor and locating the hearth within the house are all innovations of this time.[59]

The new mode of pastoralism-primitive agriculture also created in its wake new modes of thought, generated new values, created a new culture, initiated a new sense of art and set in motion the first rudimentary beliefs which were to later on assume the forms of religion. About all these superstructural aspects, we shall deal in a later part of this chapter.

B. Iron Age: Period of Protohistory and Tribal Oligarchy (1200 BC-240 BC)

i) The Spread

The iron age of Karnataka displays an unprecedented proliferation of human habitation. On the one hand the population in the existing nuclear area becomes dense when compared to the earlier chalcolithic period and on the other, there is an expansion of human habitation to such an extent that, but for Bidar district, where no remnants have so far been found of this period, it may be said that the entire state of Karnataka including its till then by and large untouched Malnad became home for human settlement. About 700 iron age sites have come to light so far. Of these 413 lay in the South Maidan region, 268 in the North Maidan region, 17 in the Malnad tract and nearly a dozen along the Karavali plain.[60]

Among the new areas of penetration have been Hassan, Kodagu, Mandya and Tumkur districts. The penetration of habitation into the heart of the Malnad such as, for instance, Somwarpet and Virajpet taluks in Kodagu and Sakleshpura taluk in Hassan speak of the role of iron in being able to transform the environment to suit the requirements of man.

As the figures of regional dispersal indicate, the proliferation and expansion is particularly marked in the South Maidan region. There is a density of sites in eastern Bangalore, Kolar and north eastern and eastern Mysore districts. For instance two taluks of Kolar, Malur and Bangarpet alone accounted for 81 settlements and in Mysore district, 47 were concentrated in Kollegal taluk alone.[61]

Ravi Moorti's analysis of this locational pattern reveals that these sites were situated at very close proximity to iron, copper and gold mines. He writes: *"As the large concentrations of sites are seen around Bellary, Hospet and Gangawati area (which are rich in iron ores) as well as Hatti and Kolar Gold Fields area (which are known for gold mines), it seems probable that these natural resources might have been exploited by the megalithic people."* [62] Even to this day Kollegal discloses gold, at the surface level too at times.

ii) The Significance

Reliable C14 dates of the start of the iron age in Karnataka place it at 1200 BC from the Komaranahalli site in Harihara taluk of Chitradurga district, 12 kms east of Hallur. Next, iron found in Hallur was dated at 1000 BC. Following this was iron taken from Tadakanahalli which was similarly dated. Later we have a continuity of evidences from across the different parts of Karnataka at regular intervals till they gradually usher us into the period of history per se.

It is significant from the Komaranahalli and Hallur excavations that **iron discovered in Karnataka predates all earlier discoveries of it in India.** Before we discuss the implications of this on our understanding of Indian prehistory and that of Karnataka's, let us take a look at the skill of the anonymous smiths that made iron implements and weapons in Komaranahalli and Tadakanahalli.

18. Distribution pattern of megalithic sites in Karnataka.

OP Agarwal, Hari Narain and GP Joshi submitted sectional samples of a spear, a rod with hook, an unidentifiable iron object, a dagger and a sword--all from Komaranahalli--to metallographic analysis and came up with astounding conclusions.[63] According to them: *"...the spear was fabricated by lamination technique, in which low carburized and high carburized sheets were piled up one above the other and forged together into the shape of a bar. The bar was later on given the shape of the spear by forging. The small grain size of relic carbide and elongated slag inclusions revealed that this spear was heavily worked and tempered at low temperature. The presence of less slag inclusions in the blade of the spear in comparison to the tang portion indicated that special attention was given for the fabrication of the blade."*[64]

About the bar, this has been their conclusion: *"...these megalithian smiths first prepared these small bars by following the lamination technique which were later on used for the fabrication of spear, sword, dagger, other weapons and implements big in size."*[65]

19. Iron objects (showing sampling zones with cross lines) from Komaranahalli, Chitradurga district. (1) Spear. (2) Rod with hook. (3) Rod. (4) Spear and (5) Sword.

This was their conclusion about the sword: *"The presence of tolerably high amount of carbon made it sufficiently tough, wear resistant and sharp to cut harder things in just one stroke."*[66]

This has been the interpretation of these archaeometallurgists: *"...all these artifacts were prepared by following the lamination technique. Megalithian smiths of Komaranahalli used the metal, which was extracted from the iron ore by direct process. Pure iron was removed from the bloom by repeated forging. Metal pieces were later on carburized in the furnace as per the need of the artifacts. All these metal* *pieces of carburized and highly carburized iron were placed together, forged and folded. The final folding of the pile was done in such a manner that high carbon layer must appear on the surface as well as inside the pile along with low carbon layers. These small piles were later on joined together and given the shape of the spear or the sword, etc.*

Presence of high carbon imparts the toughness whereas low carburized iron imparts good flexibility to withstand the sudden blow. High carbon tempered structure which was prominently present in only the blade of the spear and the sword shows that the smith might have adopted this to impart extra toughness and sharpness. This technique imparts internal as well as external strength to the spear and the sword."[67]

It would not be wrong to mention at this juncture that the very name Komaranahalli may be a derivative from *Kammaranahalli* or *ironsmith's village* in Kannada.

The authors in the form of a general conclusion to their analysis say: *"...the megalithic people of peninsular India had* ***mastered the layering technique*** *for the fabrication of iron artifacts around 1100-1000 BC* ***whereas the smith in other parts of India were still in experimental stage.*** *The attainment of such a high technical skill is not a matter of few years.* ***This means that these smiths must be experimenting for centuries to reach this stage around 1000 BC."*** [68]

Thus the first dates of iron which has been fixed at 1200 BC is sure to be pushed further back till one can discern evidence of its infantility.

Till these early dates for iron were discovered, the general impression had been that iron had been introduced from the north and had reached Karnataka after 700 BC.

Iron age beginnings are datable to 1000 BC in Pakistan, 800 BC in north west India and 700 BC in eastern India.[69] These dates are in keeping with the Indo-Aryan line of progress and have on this additional count left a deep impress in the minds of historians. As Dilip K Chakrabarti says: *"A strong undercurrent of diffusionism has, in fact, been always very apparent in Indian archaeology and it is only recently that such hypothesis are being increasingly discarded in view of the new discoveries or being modified or challenged on theoretical grounds."* [70]

The Hallur discovery has led MS Nagaraja Rao to state *"...the suggestion that iron was 'ushered into South India later than in the Ganga plains' is no longer tenable".* [71]

A Sundara contributes to this debate by saying *"...the possibility of iron gradually moving from the North into the lower Deccan and South India subsequent to the first use...does not seem to have support."* [72]

DP Chakrabarti elsewhere concludes that *"early iron using centres in India could have developed in many places where iron ore was available.... It seems that while in North India iron technology diffused from Anatolia via Iran, in South India it may have been discovered independently."* [73]

OP Agarwal, Hari Narain and GP Joshi however state in no uncertain terms: *"It is difficult to say where and how iron was first of all discovered and smelted but this could very well be some place in South India. It could also be possible that after the discovery of iron in South India, it spread to other parts of India."* [74]

In fact MK Dhavalikar is quite explicit about this. He says that before the first evidence of iron in Maharashtra obtained in 800 BC it *"must have taken about two centuries for iron to reach Maharashtra from Karnataka."* [75]

The Hallur and Komaranahalli excavations have thus led to the modification of several notions of Indian prehistory. On the one hand **with ragi, ashmounds and again with iron, peninsular India has been able to receive importance not just as a repository by diffusionists but also as a developer and broadcaster of social change and advancement.**

iii) Impact on Material Culture

The commencement of the iron age signalled the end of the stone age in the real sense. While the age of copper and bronze saw the introduction of these metals on a wide scale, due to the inherent softness of copper and its alloy, bronze; they proved to be weaker than the stone tools of basalt and chalcedony. Thus throughout the age of copper and bronze one observes the continuity of human dependence on stone tools, although the quality of stone tool production was far advanced over that of the mesolithic and palaeolithic past. But with the start of the iron age, one observes that iron *"dominates the tool technology"* [76] thereby displacing stone tools and thus locating the stone age in the museum of history. The break with the age of stone is indeed clinched with the onset of the age of iron. Engels says that the age of iron inaugurates the upper stage of barbarism and lands humankind on the laps of civilisation.[77]

Excavations from iron age sites in Karnataka have disclosed not only the conclusive end to the production of stone tools and their replacement by iron but also the production of several new tools such as, axes with ring fasteners, bill hooks, hoes, wedges, horse bits, tongs, coulters, chisels, spades, knives, tripods and hoes. One of the immediate impacts of these new tools was the expansion of human habitation and higher yields in agriculture due to deeper digging and improved harvesting. A whole new generation of crops were introduced, such as jowar (sorghum) and bajra both of which have come down from Africa.[78] In fact the first report of bajra is again from Hallur. Cotton cultivation must have, in all probability, commenced at this period. It appears that castor, which again is a plant first cultivated in Africa, was introduced to Karnataka during this time.

With the start of the iron age there is, in addition, the first attempt at irrigation by the construction of walled embankments to arrest surface flow of rain water.

Bridget and Raymond Allchin say: *"Terracing [of the chalcolithic period] would further provide a logical first step towards the earth or stone embankments, which, from the iron age at least, served as surface drainage tanks throughout the areas of impervious granite rocks."* [79]

These embankments or tanks were quite widespread and not confined to any particular part of Karnataka. KK Subbayya has this to say of such embankments built in Kodagu: *"The megalithic builders were an agricultural community. They constructed earthen bunds to store the flowing rainwater from the upper elevated regions, thus forming huge reservoirs. This stored water was utilized for the purpose of cultivation. This idea is clearly visible in one of the best megalithic sites in Coorg,* *namely Moribetta. The dolmens are situated on the top of a granitic hill and to its south is a valley of vast cultivable land. And at the upper side of the valley, is a perennial water source, which could be used for the cultivation of the land in the valley. They grew paddy and ragi, the staple food of South India."* [80]

There can be little doubt about the role of these embankments in increasing the productivity of agriculture. Although these embankments were originally relatively small, we can be hardly mistaken to say that these first irrigation structures of the iron age people were the forerunners of the thousands of tanks that would come up in future. It was the genius of arranging these stones and cementing them with earth that channeled the imagination of posterity to erect magnificent barrages even across the Tungabhadra and Kaveri. If the Brahui speaking Baluchis called the series of stone built dams 5000 years ago as *gabarbands*, the *kattes* of Karnataka which were beyond doubt the first imposing man made structures of this preliterate past personified *kattu*, which in Kannada means, *to build*.

iv) Pattern of Settlements

Already the later phase of the chalcolithic witnessed the transition of human life from nomadism to a settled mode. The dawn of the iron age only completed this transition and thereby laid the foundation for the growth of marked cultural differences between the people of one region and that of another.

This new mode of life began to develop a pattern of its own and **it was on this pattern that the village community of the future came to rest.**

It is unfortunate that not even in one of Karnataka's hundreds of iron age settlements has a horizontal excavation been undertaken. Thus archaeologists have left us a treasure trove of 'cross sections' and 'lateral sections' which are all nothing but the result of vertical digging; but there is no longitudinal section, or a panoramic aerial view of the excavation of an entire settlement complex. Such an attempt at a Tekkalakota or a Sanganakallu or a Brahmagiri is bound to prove useful. Such an endeavour may not lead us to unearthing a Harappa or a Mohenjodaro but they surely can help uncover the structure of the settlement capable of throwing light on the emerging complex and the composition of the new cities that were later to rise on its foundations. Therefore, in the absence of archaeological evidence on the structure of these setlements we would like to pose some probabilities and seek a pattern.

The major iron age settlements were already a complex. On the one hand was their sheer number. Surely the largest settlements could have had more than a thousand people. BK Gururaja Rao says that these settlements were inhabited by sizeable populations.[81] On the other, this population was increasingly divided into different professional groups from the peasant to the pastoralist, from the rearer of sheep to the keeper of cattle, from the iron smith to the gold smith, from the copper smith to the carpenter, from the glass maker to the weaver, from the tribal autarch to the horse-borne soldier and from the shaman to the sorceress. Iron age society was not only the outcome of the split and thus the development between agriculture and cattle rearing between the sexes, but its dawn led to the further division of tribes into different professions and to the division within tribes into various professions. All these professional groups, protoclasses, to be more precise, must have come together in the settlements since the increasing division within and between tribes only imposed on them the joint need to collaborate and cooperate. One must expect the end of barter and the beginning of trade during this period. The settlement was thus a welter. It was the forge of the iron age in which the layers of tribes were beat and carbonised by what blacksmiths of Komaranahalli used--the lamination technique--to yield an amalgam that would serve as the model for the evolution of what has continued into this day--the town and its muddied reflection, the village.

As George Thomson has said, in the iron age *"we find further progress in handicrafts, permanent settlements, inter-tribal barter and metallurgy. At this level the tribal structure of society inherited from the lower grades, is beginning to break up."* [82]

v) Making of the Superstructure

Discussion about culture in the pre-neolithic period was inevitably based on geological, geographical, floral, faunal and other ecological factors. The difference between one palaeolithic tribe and another was determined by these causative factors. As Alexeev says: *"All elements that arose during people's adaptation to their geographical environment, and as a response to and interconnection with it, were included in the concept."* [83]

But with the transformation from food gathering-hunting to pastoralism-primitive agriculture, the role of the environmental factor begins to gradually grow less important. The 'social factor' or rather the 'man made factor' begins to gain prominence and with the emergence of class society after its passage through the iron age, the social factor gains the ascendant and the environmental factor is pushed to the background. As Alexeev says *"...the more mankind's economic-cultural activity develops the more it breaks loose from the geographical environment."* [84]

This is how Marx and Engels stated it: *"The identity of nature and man appears in such a way that the restricted relation of men to nature determined their restricted relation to one another, and their restricted relation to one another determined their restricted relation to nature, just because nature is as yet hardly modified historically. On the other hand man's consciousness of the necessity of associating with the individuals around him is the beginning of the consciousness that he is living in society at all. This beginning is as animal as social life itself at this stage."* [84A]

In other words, the development of the productive forces leads also to the development of culture too. With the transition to pastoralism-primitive agriculture, society is on a firmer basis in sustaining and reproducing itself; it finds for itself occasions to wander into other spheres of human endeavour and thereby begins also to create, as a result of its new material basis, novel avenues for thought. This enhanced activity only contributes to the growth of culture and brings in newer and newer elements and aspects into the superstructure of human life. The superstructural horizon is widened. Thus in discussing about the culture of the pastoral-primitive agricultural people we should not forget that **this new mode of existence also began to build the superstructure apart from bringing in new content and form to its old sectors.**

Another important aspect of culture during the period of pastoralism-primitive agriculture is the commencement of inequality within society during the period of chalcolithism and the development of this during the iron age, to the point of breakdown and internal rupture. Sergei Tokarev says that: *"Inequality had already begun to develop within these communities, but class stratification did not yet."* [85] The reflection of this developing inequality and gradual breakdown as reflected in the superstructure is another of its important facets during the period. Values and tendencies emerged, new fields and vistas cropped up; that would mirror, reinforce and condition this process.

The culture of the pastoral-primitive agricultural stage also revealed as one of its significant traits, the man-woman division within society; their spheres of activity and perceptions. Prolonged periods of inactivity among males who carried on hunting in the palaeolithic period itself often afforded them greater opportunities than the woman to engage in nonproductive activity such as art.[86]

In pastoral-primitive agricultural society this was the broad division of labour among the sexes: agriculture, cooking (including pounding, grinding, collecting firewood and food gathering as a supplementary activity), child rearing, pottery, basket making, mat weaving and weaving belonged to the woman. Most industry was home industry and thus the woman came to develop them. Cattle grazing, smithying, mining, carpentry, construction (of irrigation embankments, dwellings, megaliths), trade, supplementary hunting, war and keeping slaves were male domains.

The development of art and social expression in culture carried with it features of this gender division.

Let us now look at all this in its vividity.

a) Megaliths for the Dead

The passage from hunting-food gathering led to the further development of human attachment, to human care other than maternal within society. The loss of an individual was bereaved and the memory of the dead was cherished.

As already mentioned, the palaeolithic period has not yielded any skeletal remains in India whatsoever. But with the advent of the chalcolithic, the study of skeletal remains becomes a major preoccupation for archaeologists. Karnataka has reported innumerable such burials from this age onward. Most of these during the chalcolithic age were urn burials. The attention paid to these burials, tell us a lot about the degree of human bonds that had developed among these people. There is little doubt that such burials were attended by ritual. More often than not, beside the urn a small pot of grain would be placed. Further these burials were made beneath the floor of the houses as if the dead continued to live among the living. Such burials of women, men and children have been uncovered.

However, it is the transformation to the iron age that really **announces** the cult of the dead. The construction of huge stone structures at the graves called megaliths (*mega* = big, *lithic* = of stone; not to be confused as a big type of stone tool) is what is striking about the age of iron in Karnataka. This culture although common to several other regions of the world, west and east of India, still is marked out in south India by the strength of numbers. About 45 types of megaliths, from 1,400 sites have so far come to light. Of these 1,116 have been located in peninsular India with Tamil Nadu contributing 388, Karnataka 300, Kerala 18, Andhra Pradesh 147, Maharashtra 90 and Pondicherry 3. Of these 239 have so far been excavated.[87] However, MS Nagaraja Rao mentions of the existence of 350 megalithic sites in Karnataka, writing much earlier than SB Deo.[88] In these, not a few but several thousand burials have so far been identified. In terms of concentration, the megaliths of South India stand first in the world. Subbayya's investigation at the Koppa site alone in Kodagu district led him to conclude that there were thousands of burials at the site that it became *"impossible to enumerate"*![89] The megaliths are an important source for understanding the iron age. The rich repertoire of funerary articles has told us a lot about the material life of the period. Particularly marked has been the amount and variety of iron implements and weapons found in these megalithic burials. In addition have been items of gold, copper and silver, a variety of grains, a panorama of pottery, items of beautification such as carnelian beads and necklaces and figurines of terracota and metal. This elaborate list of items that were placed in these graves speak all the more about the bonds that had emerged among the people of that time and how important was the notion that the dead had to be kept happy, which itself was an extension of the notion of happiness among those alive.

Some archaeologists basing on the typology of each megalith, the total of which runs to 45, have tried to identify similarities in design across regions and thus seek the source of external influence on the iron age of Karnataka--starting from the dolmens of England to those of immigrants from Central Asia, Iran and the Caucuses, to those from the Levant and Arabia to that of Mesopotamia and the Persian Gulf and Yemen to those from Malaysia and Indonesia.[90] A Sundara who has made by far the most extensive study of megaliths in Karnataka says: *"Regarding the source of megalithism, very close similarities of the passage chamber tombs of North Karnataka with those of Western Europe; port holed chamber tombs and the rock cut tombs of the Western Ghat region with those in the North African region, in Palestine, Jordan valley, in the Persian Gulf and in Karachi areas; the occurrence of head-rest in the neolithic levels in the Kaveri valley and in Egypt; the discovery of burials with rubble packing and black-and-red ware at Tuma in Nubia closely analogous to those of Brahmagiri, and the linguistic similarities of certain words of South India and of the Mediterranean region alluded to by Cornelius and considerably small chronological gap between the megaliths of the two regions, may suggest that the East Mediterranean region might possibly be the source of South Indian megalithism."*[91] What is any how clear from this is that megalithism in South India was non-Aryan, the Indo-Aryans having little fancy for the construction of these structures which in any way was related to primitive agriculture, the Indo-Aryans being pastoralists. A lot of attempt has been made to show that it was under the influence of the Indo-Aryans that iron was introduced to the south despite evidence that makes this pretty unsure. But the fact that megalithism inaugurates iron use in Karnataka and the south is already an established point. And if this megalithism is non-Aryan then it can only mean that if at all the knowledge of iron was brought from outside, it could have been, as Sundara suggests, from the Mediterranean; opening thereby the contention by several archaeologists that the route to peninsular India was not that which the Aryans later traversed or the Harappan forerunners would take--that of the Khyber and Bolan passes--but a coastal route along land or by all means one along the sea close to the coast.

The greatest volume of research, writing and analysis of Karnataka's prehistory is perhaps on the question of megaliths and there are an umpteen number of theories to break one's head over. Quite often one is left with the feeling that these have been the archaeologists' liberal contribution to the modest variety of funerary offerings made at these graves.

Among the main types of megaliths have been: pit circles, burrows, chambers, port-hole or passage chambers, sarcophagi, urn burials, rock-cut chambers dolmens and menhirs. Of these one observes a spatial distribution. Not all the types of megaliths flourish in all regions of Karnataka. For instance chambers and urn burials dominate in the southern part of the state while pit circles are more prevalent in the northern part.

We observe that while in the chalcolithic period burials were made beneath dwellings, in the iron age the graves are situated away from the houses. We shall discuss further about the notional implications of these practices on the people of the iron age.

20. A megalithic pit-burial with grave goods and extended skeleton from Maski, Raichur district.

It may be wrong to rule out the role of external influence in the origin of the megalithic culture and perhaps even trace a few types to regions outside the country. But **the problem with such interpretation lies in its inability to come to terms with a measure for local contribution and development.** For instance we observe that the megalith itself has its firm roots in the urn burials of the earlier chalcolithic period. The rise in material life resulted in the emergence of inequalities within society. SB Deo tells us of this disparity: *"Apart from the variety and number of objects of metal, it is only the sociotechnic items which help us in gaining some insight into the concept of status prevalent among the people. Though on the face of it, the megalithic culture appears to be homogenous and identical, in reality it was not so. Binford defines the sociotechnic items as those artifacts which are related to the status or rank*

21. Vertical section of megalithic pit graves from Maski, Raichur district.

of a person in a given social set up.... At Brahmagiri pit circles gave 47 objects of iron, whereas the same number of cists gave only 16 objects. It may not be wrong to say that those interred in pit circles were economically better off than those interred in cists. This is further supported by the fact that all the gold beads have come from a pit circle and none from a cist. The Maski evidence shows that of the 8 megaliths excavated, only one gave evidence of a gold bead and gold leaf, whereas the remaining seven were devoid of any such prestigious items." [92] It is therefore obvious that the status of those buried in the pit circles was superiorly unequal to those in the cists.

22. A megalithic cist-grave from Brahmagiri showing port-hole and grave-goods.

Sundara says that *"...it seems chamber tomb builders seem to be a separate community who primarily were associated with river valley environment."* [93]

Regarding this question of the emergence of social grades in society and their ultimate polarisation into distinct classes as reflected in the burials characterised by a modification and development of megalithism, Sergei Tokarev draws a god inference from Egypt. He writes: *"Burials in the pre-dynasty epoch in Egypt were similar to those of other countries. The dead were buried in small oval pits in a crouched position on their sides, and a few personal items were buried with them; sometimes the body was cut into pieces. But burial rituals changed considerably during the earliest dynasties, especially in the case of the pharaohs. Graves and tombs gradually became larger and more complex, rising above the ground, and taking the shape of a mastaba [or megalith], a tomb with a rectangular base and sloping sides; and from the third dynasty, the shape of a huge pyramid. The pharaoh's corpse was embalmed,*

23. Plan, cross section and vertical section of a megalithic cist-grave. The plan also shows a capstone.

and turned into a mummy. Later the bodies of the pharaoh's close officials, and subsequently members of the middle class, were mummified too." [94]

Thus it is clear that the rise of the megaliths in place of the chalcolithic urn burials on the one hand marked the start of a new phase in culture. Burials became an indication of status and status as we know very well was marked along tribal lines. It is but evident from the host of megalithic burial practices recorded from people living in the stage of tribal autarchy, yet drawn from contemporary times, that **each type of megalithic burial was distinct for each different tribe.**

The Malai Arayans of Kerala, the Kurumbas, Todas and Irulas of the Nilgiri hills, the Gonds the Kols and the Kois of Madhya Pradesh erect miniature dolmens even today. KK Subbaya discovered pit burials in his excavation at Heggadehalli which was identical to the practice of the Kols.[95] Thimmareddy and S Krishna Rao from their study of contemporary megalithic practices among various tribes of Andhra Pradesh come to the following conclusion: *"...it can be interpreted that different types of megaliths are erected by different endogamous groups. In other words, the occurrence of different megalithic types may be viewed as representing the cultural dichotomy within the human groups inhabiting the same ecological zone."* [96]

Edgar Thurston records the continuation of megalith building practices of different castes and tribes of Karnataka. His *Ethnographic Notes* makes interesting reading: *"Writing concerning the Kurumbas, or shepherd caste of Kaladgi, a correspondent of the Indian Antiquary states that he came across the tomb of one only four years old. 'It was a complete miniature dolmen about 18 inches every way, composed of four stones, one at each side, one at the rear, and a capstone. The interior was occupied by two round stones about the size of a man's fist, painted red, the deceased man resting in his mother earth below."* [97]

It is important to note that all evidence concerning megaliths has continued only among the tribal peoples. The start of a megalithic culture while being coterminus with the iron age (since it is only with the use of iron that large pits could be dug and huge slabs of stone cut and boulders moved) passes away with the passing of the social order from tribal autarchy to class society. Thus it may be said that the **megaliths represent the period of tribal oligarchy** and fade away in history with the breakdown of the tribal order and the emergence of class divisions.

b) Art and its Social Content

So far no remnants of art from the palaeolithic period have been found. This absence does not in any way mean that human artistic activity had not developed at that time.

Yet it is true that the transformation of society to pastoralism-primitive agriculture led to a more developed material life. This enrichment was reflected in the development of art too. **The pursuit of art on a regular basis requires a mode of life that provides society with the means to remove itself from a preoccupation with production.** The superior mode of existence of the period of pastoralism-primitive agriculture ensured this leisure. This was the reason why we notice a sudden spate of paintings and rock embursings starting with the chalcolithic age. Their number only became more profuse with the advance of society into the iron age.

The emergence of pottery marked the transition of society to the stage of primitive agriculture. Cereals and millets that were cultivated could only be consumed by cooking. Women who discovered agriculture also developed the art of making pots. There were several types of pre-fired and fired pots. *"The rims and shoulders [of Maski fabric] of vases are usually painted. The designs are simple such* *as sets of parallel, vertical or oblique lines, criss-cross as well as variedly complicated and others. The lines are generally thick, wavy and uneven and with sharp pointed ends. What these complicated designs are is difficult to surmise owing to their fragmentary condition. Some may be branches of plants. Occasionally, conventionalised twin fish are beautifully drawn. The complicated designs especially, have scarcely any comparisons from any other sites in India excepting those of Singanapalle....*

The pottery [of Savalda fabric] is beautifully painted in a regularity, in violet black. The designs are varied, clear and simple, drawn on the rims and shoulders of pots and vases or in the interior of vases. They are sets of parallel, curved, oblique, horizontal criss-cross, zigzag lines, vertical lines, chains, dots and strokes, hatched diamonds and combinations of these into some curious geometrical designs. Besides, the other types of designs are arrows, realistic and conventionalised plant and fish motifs, and probably peacock and harpoons. The arrow, harpoon and fish motifs are more common." [98]

The making of pots and the symmetrical patterns that were painted or pinched on their necks and shoulders was the art of women. It is interesting to note that the patterns on the pots only rarely carry images from the faunal world of the male. These geometric patterns ceased with the arrival of the potter's wheel and the passing of pot making from a domestic woman-held preoccupation into that of a profession in the hands of the male. This is a development that came about with the onset of class divisions in society.

It is quite possible, that these patterns themselves being repetitive could have originated from weaving--the weaving of mats, cloth and the weave of basketry. Weaving itself involves questions of symmetry, arithmetic and geometry, which originated, as JD Bernal says, from basket making, *"leading to a greater understanding of form and number."* [99]

In his article on prehistoric art in Karnataka Sundara rightly discusses the building of houses during neolithic-iron age times under the heading of art. The structure of the huts of these neolithic people was circular at the base, had wattle and daub walls and a sloping roof of thatch held up by a central pole. The structure of the hut was only a modified extension of an inverted basket. The daub and wattle were at times plastered with mud, and this only displayed a parallel with the origin of the pot which initially, as Engels says, was a basket or wooden vessel with walls plastered by mud. These patterns in the building of houses has continued well into our times. In fact the development of *rangoli* with its intricate geometric patterns require a degree of abstract thinking, and the development of mathematics. It is no coincidence that *rangoli*, too which came into vogue at a later period, like the painted designs on the pots, was an art developed, perfected and excelled in by the woman.

Paintings and bruisings on rock have come down to us only from the neolithic age onwards. Karnataka posssesses the second largest concentration of rock art after Madhya Pradesh. In Karnataka 12 major rock art regions having about 30 important sites have been identified. Of these 20 sites are found in the Hire-Bankal region of Raichur district. Maski can boast of several thousand petroglyphs of cattle and rich pictographs too. Another important pocket, also called the Bhimbetka of Karnataka is in the caves of Badami. So far rock art has not been traced in southern Karnataka. The reason for this perhaps lies in the concentration of research activity in the south on excavating sites.

24. Isometric reconstruction by HD Sankalia of a chalcolithic village in Inamgaon, Pune district, Maharashtra. The houses were rounded and had straw roofs supported by wooden poles. The neolithic settlements of Karnataka could not have appeared very different.

The main themes in rock art derive from the main preoccupations of the people of this period. Agriculture, cattle tending and hunting are the main themes. Mathpal has identified at least 22 types of animals and birds from these paintings. This we feel is an incomplete list. But the most common among these are elegant drawings of humped oxen and cattle such as the ones found at Piklihal, Maski, Tekkalakota and Billamrayanagudda. This preoccupation with oxen, cows, sheep, goat and buffalos speak of the importance of pastoralism. Some pictures also depict scenes of cattle being grazed. Wild animals are at times depicted as being hunted, or there are pictures of a tiger attacking a herd of deer. There is also the picture of an animal which has been harpooned. The pictures are either outlines or silhouettes. The outline drawings often also carry patterns on the body of the animals.

25. Dispersal of rock art sites in India. The southern nuclear region has the second largest concentration of rock art after Madhya Pradesh.

What is apparently absent in the paintings or bruisings is all reference to agriculture. There are no paintings of plants or crops. The woman's world is evidently absent. Any superficial analysis of these paintings can lead one to conclude that rock art was the domain of the male and the rock artists were exclusively men. But such patricentral conjectures only contradicts the level of development of society and makes it appear as though this society survived on a pastoral-hunting basis and that woman and agriculture were thoroughly neglected. But this need not be true.

A good deal of paintings of women are depictions with some significant characteristics. The woman is pregnant, she is dancing, her arms are stretched out before her and her fingers seem to be casting out something. There are also pictures of couples in coitus and the woman and men in most of these paintings have elaborate motifs painted on their bodies. In all these paintings women are more prominent than men.

26. Rock bruised and painted bulls from sites in Raichur district. Nos 1, 3 and 4 are from Piklihal; nos 2 and 5 from Maski; and no 6 from Billamrayana Gudda.

Sundara tells us that these paintings *"almost exclusively of women engaged in ritual dance [is] evidently connected with the fertility cult."* [100] Further in his comparative article of rock paintings in Bhimbetka of Madhya Pradesh and Karnataka, Mathpal says: *"Group dancers and men and women engaged in sex-acts are also the common motifs painted at Bhimbetka, Benakal, Hampi, Kupagallu and Maski."* [101]

In the succeeding part of this chapter, we shall discuss about the relationship between the fertility cult, ritual sexual intercourse and primitive agriculture. For the present however, we would like to only make a statement; that, primitive agriculture is directly related and expressed through the fertility cult and ritual coitus. Thus the depiction of women in dance and their outstretched hands with open fingers at times, seem to express in ritual, the broadcasting of seeds as is characteristic of *podu* agriculture.

It is therefore clear that the rock art of this time completely expressed the mode of production of the period. The painting is typical of the combination of cattle rearing with primitive agriculture. In one such painting there are also two dogs that watch as onlookers.

Sundara tells us that the *"Gangavati-Hospet area relatively has the largest number of localities with rock paintings and appears to be the focal area of this art activity...it appears that this region is highly potential and what is known is just a small fragment of a very large number yet to be explored...."* [102]

Thus we hope that more of this exceptional art of these primitive people will be revealed to us by archaeologists so that we could have a deeper and richer understanding between the forms of art, its content, its relationship to production and the emergence from its graded abstraction, of the **first rudimentary pictographic symbols of writing. The rock paintings far from being mere representations of sense perceptions, were already patterened to communicate with the increasing use of abstractions.** The unity of art, science, dance, music, magic and ritual is evident in these rock art expressions. While the level of development of society provided the people of the pastoral-primitive agricultural age with the leisure to engage and express themselves through art, it must not be forgotten that the upper limit of this social development also imposed a direct and self-evident bond between all these different spheres of human endeavour with production. This only reminds us that it was from

27. Side view of rock bruising of a humped bull belonging to the megalithic period from Gavali, Kundapur taluk, Dakshina Kannada district.

28. These rock paintings taken from three different places depict line patterns on the body of the object. (1) and (3) are from Chiklod and Urden in Madhya Pradesh and (2) is from Badami in Bijapur district.

production, that is the base, and to serve production that the superstructure was born. The flight as a whole, of art and science, magic and ritual, dance and music from their direct signification of production and the mutual moving apart of these binaries from one another needed the advance of society from tribal oligarchy to class division.[103]

c) Ritual, Magic and Belief

The commencement of a pastoral-primitive agricultural mode of life creates in its wake a new world view. The fertility cult and the mother goddess dominate the early period of chalcolithism and towards the close of the iron age, shamans and ancestor worship begin to emerge. Religion as such is yet to come into being and the religious beliefs of the period continue to be confined within the parameters of magic and its ritual.

29. Rock painting of human and animal motifs from Aregudda.

A significant development in the superstructure of the period is the change that agriculture brings about in the thought and culture of the people. This is brought out very well by Debiprasad Chattopadhyaya in his *Lokayata*. He talks of a primitive proto-materialism and a pre-spiritualistic consciousness at this stage.[104]

Literature on the history of religion tells us that *"generally there was a female deity in the neolithic"* and that *"perhaps the worship of female deities was connected*

30. A harpooned animal: rock painting from Aregudda.

31. Grazing sheep. The herdsman's dog is conspicuous. Fertility coitus is also depicted.

32. Rock paintings of primitive agricultural ritual dance with onlooking dogs
at Baramadevara Gundu in Hampi, Bellary district.

33. Rock painting of primitive agricultural ritual from Mallapur, Gangavati taluk, Raichur district.

34. A woman and man in dance.

with the fertility cult or lunar cult. The social basis for these cults was probably the matrilineal clan system which in the neolithic, due to the development of agriculture, should have already taken shape." [105]

Agriculture, with its cyclical periodicity and defined seeding-flowering-fruition cycles led to its calculation in the lunar motions thereby causing the lunar calendar to originate.

We learn from Engels that in the period of barbarism *"methods for increasing the productivity of nature through human activity was learnt."* [106] Owing to the primitive level of the tools it therefore become necessary for society to exhort nature to yield more and it was such exhortation that led to the origin of *Tantra* or agricultural magic. Debiprasad traces the origin of Tantrism to the fertility magic of the early agriculturists.[107] Chattopadhyaya says: *"To the early agriculturist, it was not known why or how the plants really grew. The process from sowing to reaping was with them greatly mysterious. Besides, the technique was poor and consequently the prospect of success extremely precarious. That is why it required patience, foresight and faith.*

But how could magic provide them with all these psychological necessities? Magic rests on the principle that by creating the illusion that we control reality, we can actually control it. But how could this illusion be created? By enacting it in fantasy. That could not obviously have any effect on the actual course of nature. But it did have an appreciable effect on the performers themselves. Inspired by the belief that the fulfillment of the desired reality is ensured by enacting it in fantasy, they were able to work harder for the purpose of actually fulfilling it.

Magic rests on ignorance. But it would be wrong to view it as mere ignorance. For it is also a guide to action, though a psychological one. At the initial stage of agriculture, at which this psychological guide is most needed, we naturally find a peculiar intensification of magical beliefs and practices." [108]

Chattopadhyaya traces the origin of Tantrism, as a philosophical system, to the period of Harappan civilisation. While as a philosophical system Tantrism could have been as late a development as this, the sources of its philosophical universe are clearly rooted in the primitive agriculture of the chalcolithic period.

Thus *vamachara* generally misconstrued as *the left-hand-path* has its origin in Tantra. *Achara* means ritual practice and *vama* means woman or the sexual urge (*kama*). "***Vamacara*** *thus stands for the ritual practices of woman and sex."* [109]

This is how Chattopadhyaya seeks to explain the sex and fertility cult with that of primitive agriculture. He says: *"Being the invention of women, agricultural production was originally looked at as being vitally related to the female reproductive function.... It was because of the fact that the women were the first agriculturists, not only were they the original weilders of agricultural magic but, further, the essence of this magic consisted in linking up their fertility with that of the earth."* [110]

"In Tantrism, we find the greatest emphasis being placed on the ritual centering round the female genital organ. The basic feature of the rain making rite, as practised by the women-folk of our backward peasantry, is to take recourse to nudity. The idea is that the female reproductive organ, thus exposed, would enhance natural

fertility. This idea is, as a matter of fact universal among peoples surviving at the backward stages of economic development...." [111]

Thus nudity cults such as at Chandragutti of Shimoga district have their origins in this period of prehistory.

Further, Chattopadhyaya says: *"What is the significance attached to the vermilion? We are going to argue that vermilion stands here for the menstrual blood. And since in primitive thought menstrual blood is viewed as the basis of human productivity, the act of smearing it on stone is designed to infuse the productive energy into the field. This alone can explain the tremendous significance attached in Tantrism to the menstrual blood or its substitutes."* [112]

It is from this smearing of menstrual blood that its replacement by the blood of animals, and thus animal sacrifice and the application of the vermilion spot on the forehead of women comes, but much later.

While we may be unable to speak of *vamachara* per se, we get a clear indication from the rock art of the period regarding the notions of magic practised by the chalcolithic and iron age people of Karnataka.

One outstanding feature of the rock paintings is that all significance has been removed from the faces of the women. They are the least defined. Quite often it is only the bulging milk laden breasts and the swollen stomachs indicating pregnancy that are brought out and it appears that they are mere torsos without heads. This itself demonstrates the emphasis behind this magic. **They are not representations of mere dance but of a ritual fertility dance and the faceless women are no more than an idea of the mother goddess. The women are an abstraction, just as magic is drawn from imagination and is only a fantastic reproduction of reality.**

Thus it appears all the more certain, that this prehistoric rock art, of which we have discussed in the preceding part is only the recreation of primitive agriculture, and the pictures of intercourse are an attempt by a primitive agricultural people to represent, through art, the attempt to infuse productivity to the crop bearing soil. The rock painting from Badami, unique in its style, is similar to the figurine from neolithic Thrace.

The urn burials of the chalcolithic period and then its continuation in the form of megaliths in the iron age are again drawn from notions of birth, life and death which only a people practicing primitive agriculture can generate.

The very notion of burial in place of disposing the dead by other means, is a trait which is common to all communities practising primitive agriculture. The urn burial in particular is important in that the urn in which the dead are placed (often in a crouched position) resembles the position of the foetus in the womb. All these associations have generally led to the attribution of the feminine gender to earth; always making it 'mother earth'.

George Thomson provides us with a brilliant analysis of these associations: *"It is important to observe that the magic of human fecundity attaches to the process, not to the result--to the lochial discharge, not to the child itself; and consequently all fluxes of blood, menstrual as well as lochial, are treated alike as manifestations of the*

35. Rock paintings of the iron age from Hampi, Bellary district. Among others are a robed woman with clasped fist, a crocodile, eyes of an owl and part of a boat. All these could well be totems.

life-giving power inherent in the female sex. In primitive thought menstruation is regarded, quite correctly, as a process of the same nature as childbirth....

Red is renewal of life. That is why bones from upper palaeolithic and neolithic interments are painted red. The symbolism becomes quite clear when we find, as we commonly do, that the skeleton has been laid in the contracted or uterine posture. Smeared with the colour of life, curled up like a babe in the womb--what more could primitive man do to ensure that the soul of the departed would be born again?" [113]

Let us look at George Thomson's *Human Essence* this time, to see how he analyses the dialectical relationship between the base and the superstructure on the one hand and the diverse interrelationship within the superstructure on the other, of the time: *"Man differs from animals in being conscious of his life activity. He can disengage himself mentally from his activity in such a way as to form an idea of it as distinct from the reality. This is the key to the understanding of primitive ritual. Ritual is still practice, but practice separated from the labour-process.*

The nature of primitive ritual may be illustrated by examining one of its most widespread manifestations--the mimetic dance.

Mimesis or conscious invitation, is a characteristic which man has inherited from his semian ancestors. In him it has been cultivated as a pre-enactment or reenactment of the labour-process with the objective of improving his performance. Separated from the actual process, the vocal and bodily movements of collective labour are organised as an independent activity combining song and dance. Such

36. A mother goddess icon from neolithic Thrace.

activities are a universal feature of tribal life. They are designed to represent dramatically the growth and gathering of the totem species, if it is a plant, or, if an animal, its distinctive habits and in some cases the act of catching it and killing it. Later they assume the character of an appeal to the clan ancestors, who are impersonated in their totemic form and are called upon to give their help to the living members of their clan.... In the higher stages of tribalism we find mimetic dances associated with the whole range of natural phenomena--dances to make the crops grow, dances to bring in the summer, dances to avert natural disasters, dances to revive the waning moon.

A single example will serve to show the psychological principle on which mimetic ritual rests.

37. Man and woman in mimetic dance.

The Maoris of New Zealand had a potato dance. The young shoots were liable to be blasted by east winds. Accordingly, the women who cultivated the gardens performed a dance, in which they simulated the rush of the wind and rain and the sprouting and blossoming of the crop; and, as they danced, they sang, calling on the crop to follow their example.

These dancers believed that by dramatising the growth of the crop, they could compel it to grow. This is the basis of primitive magic, which is in origin nothing more than a simple act of mimesis. Being still at the stage of perceptual knowledge, the dancers were unaware that the external world was governed by objective laws, inde-

38. This rare piece of rock art from Rampura, Raichur district, depicts a burial with grave goods and possible port holes.

pendent of their will. Yet the performance was not wasted. Just as in the labour-process man forms a pre-conceived image of the desired result, so in the mimetic dance he pre-enacts in fantasy the fulfilment of the desired reality. Regarded from this point of view, the dance has a positive value, both subjective and objective.

Subjectively, it affects the dancer's attitude to the real task. Inspired by the dance in the belief that it will save the crop, they proceed to the task of tending it with greater confidence, and so with greater energy than before. It changes their subjective attitude to reality. Objectively, being connected with the labour process, it enables the labourers to withdraw from the immediate experience of that process and to objectify it. In this act of mental withdrawal we may recognise the starting point of the process which leads eventaully to the transition from perceptual to rational knowledge.

Detached from the labour-process, the ritual act is still regarded as necessary for success in the real task, but is no longer identified with it. It is directed by a chief or priest, who in return for his services is exempted from manual labour. This is the beginning of religion." [113A]

It is quite obvious that the commencement of a Tantra based belief system was moulded chiefly by the woman. It was among the first comprehensive and articulate systems' of belief and explanation of the motions of the sun and moon, the cycle of seasons, the coming into being and passing away of plant, animal and human life and most important of all, as a magical system, it was an exhaustive attempt to bring nature under human submission so that the weal of society could be achieved. In this the matriarchs of this period brought the knowledge of astronomy and logic, zoology and botany and mathematics and music to fullest play. All this should have created a sorceress or shameness for each clan; the clan itself taking descent from the woman matriarch. We couldn't be very wrong if we stated that **scenes of fertility rites which carried wild animals in isolation from hunting scenes were perhaps representative of totems.** For all these reasons then, the contribution of the woman of the chalcolithic period far outdid that of her male counterpart. She had discovered agriculture which she continued to practice, she provided cooked food, she wove cloth and made pots, she made baskets and provided fodder for the cattle, she brought human beings to life and suckled them, it was on the female principle that the dead were disposed, she developed a world view and created agricultural magic, she gave sanctity to music and dance, she provided identity to the totems and it was matrilineage that defined the clans. In short, the stamp of the woman outdid the prowess of man. It was therefore in this stage of tribal oligarchy that the innumerable woman goddesses that Karnataka and south Indian culture would later be familiar with, had evolved. At this stage of their evolution, however, **these mother goddesses were no more than matriarchs of specific clans** whose status was not equal but superior to that of the rest of the tribe. It was this magic woman or woman sorceress from whom the foetal notions of religion were derived.

The Allchins write: *"When man first started to cultivate crops and to herd his own domesticated animals, an increased interest in fertility and in magical means of promoting it appears to have become an almost universal aspect of culture. It may well be that this interest gave rise to some of the most important new concepts in the whole of religion, namely, belief in after life, in resurrection after death, and belief in the transmigration of souls and the cycle of rebirth. Throughout the length and breadth of India there are found today, at the folk level, rites and festivals which are intimately associated with the changing seasons, the sowing and harvesting of crops and the breeding of cattle and other livestock."* [114]

The burials and the elaborate list of funerary objects offered at these internments and the ritual that accompanies them, all speak of notions of rebirth, resurrection after death (the act of urn burial itself being a seeding) and the transmigration of the soul of the dead evidenced in the port holes of megaliths.

The same authors also make the following summing up: *"Our information concerning the religion of the peoples of the southern iron age is derived almost entirely from these graves. The many excavations show a baffling assortment of burial practices. In some instances simple inhumation was found; in others, the unburnt bones were collected after they had been excarnated and placed in an urn or in a stone cist; in others again only fragments of bone were deposited, and often fragments of many individuals are found in a single grave; cremated bones are encountered in rare cases. It may be remarked that in modern practice burial rites vary from caste to caste, and ethnographic reports from South India can show just as great a variety as the iron age graves. Through the whole series runs the idea, present in the earliest Tamil literature and in modern practice, of a dual ceremony. The initial funeral leading to the exposure, burial or cremation of the corpse, is followed by a second ceremony, perhaps taking place after many months, when the collected bones are* *deposited in their final resting place. Another detail which links some of the graves with modern times is the use of lime in the infilling. The orientation of port-holes and entrances on the cist graves is frequently towards the south, although in some burial grounds it is toward another quarter, and the grounds themselves are most frequently found to be to the south of the settlements. This demands comparison with the later Indian tradition where south is the quarter of Yama. Among the grave goods, iron is almost universal, and the occasional iron spears and tridents suggest an association with Siva. The discovery in one grave of a trident with a wrought iron buffalo fixed to the shaft is likewise suggestive, for the buffalo is also associated with Yama; and the buffalo demon was slain by the goddess Durga, consort of Siva, with a trident.... The picture that we obtain from this evidence, slight as it is, is suggestive of some form of worship of Siva, but it is too early to say more."* [115]

Before we discuss about tridents, Shiva worship, and thus enter the realm of religion proper; we would like to point out that this development, which only occurs at the later stage of the iron age, and even then only feebly should not, by its direct linkage to religion in the feudal period prevent us from drawing conclusions regarding the elaborateness and systematic nature of the burials that preceded or accompanied it. Most important of all generalisations is the fact that these rites had already been so well structured and formalised in the society of that period that it made the role of a sorceress and in later stages, of a priestess, almost inevitable. As Tokarev says: *"Shamanism...is a form of religion typical of the stage when the tribal system was decaying."* [116]

In discussing about the concept of *Mana* among Melanesians practicing primitive agriculture, Tokarev says: *"Agricultural magic is mainly imitative and contact oriented. For instance, when yams are planted the Melanesians dig rocks in the ground that are the shape of yams. The rocks are believed to have some special power (**Mana**), and are supposed to give the land magical powers, thus affecting the crop....*

***Mana** has an impersonal supernatural power that the Melanesians distinguish from natural power....*

The power is diverse in terms of its orientation and significance, and it can be harmful or useful....

From a materialist point of view, belief in Mana does not come from belief in spirits or the abstract notion of an impersonal power, but from specific social conditions. The fact that there are different strata within a community, people who are in one way or other privileged--chiefs, sorcerers, members of secret societies, excellent craftsmen, etc.--fosters the vague notion that these special people in the community possess a special power." [117]

Thus the matriarchs of Karnataka, during its period of tribal oligarchy, surely had the privileged status that we have seen among the sorcerers of the Melanesians, and thus in their personages they embodied magical powers. **The ritualisation in magic of fertility and death rites only led to the attribution of magical powers to the sorceress.** Thus it was on these foundations that the origin of religion later came to rest.

The evidence of the *trishula* in the later phases of the iron age only draws importance to the commencement of Shiva worship, often in the form of a phallus. The female principle was being supplanted by the male, and the sorceresses were being replaced by the priest who in his new role, more often than not, donned the attire or displayed the characteristics of the former shamaness. But this is a question which leads us to the beginnings of patriarchy in society and ushers us through the threshold of history.

vi) Matrilineal Clans

From Engels's classification we are led to consider that with the transition to pastoralism-primitive agriculture the pairing family had come into existence.[118]

He says that *"The pairing family arose on the border line between savagery and barbarism, mainly at the upper stage of savagery, and here and there only at the lower stage of barbarism, It is the form of family characteristic of barbarism, in the same way as group marriage is characteristic of savagery and monogamy of civilization."* [119]

The origin of the gens or *gana* represents the inauguration of the Punauluan family wherein brothers and sisters were excluded from mutual sexual relations.[120] *"The gens"* says Engels *"was the foundation of the social order of most, if not all barbarian peoples of the world...."* [121]

Engels further says that once the *"proscription of sexual intercourse between all brothers and sisters, including even the most remote collateral relations on the mother's side, becomes established, the above group is transformed into a gens--that is, constitutes itself as a rigidly limited circle of blood relatives in the female line, who are not allowed to marry one another; from now on it increasingly consolidates itself by other common institutions of a social and religious character, and differentiates from the other gentes of the same tribe."* [122]

Thus matrilineal descent and as a result of it the formation of the gens or clans was in existence, we may presume, at the stage of the upper palaeolithic itself.

The commencement of pastoralism-primitive agriculture must have seen the advent of the pairing family. *"At this stage one man lives with one woman, yet in such manner that polygamy and occasional infidelity remain men's privileges, even though the former is seldom practised for economic reasons; at the same time the strictest fidelity is demanded of the woman during the period of cohabitation, adultery on her part being cruelly punished. The marriage tie can however be easily dissolved by either side, and the children belong solely to the mother as previously."* [123]

Further, Engels says: *"The communistic household, in which most of the women or even all the women belong to one and the same gens, while the men come from various other gentes is the material foundation of that predominancy of women which generally obtained in primitive times...."* [124]

The emergence of the pairing family is reflected in the commencement of house building for the first time in Karnataka's prehistory. The descent of man from caves and rock shelters and his shift to pastoralism-primitive agriculture marks the end of the punauluan family and the commencement of the pairing family. The larger structure of the dwellings, with a separate hearth for each one of them as seen in the iron age settlements marks the progress of the pairing family on a more stable basis.

We are also told that in the early phase of the chalcolithic period when the phenomena of ashmounds was witnessed, each cattlepen had a stock of from 600 to 1,000 cattle. This enormity in the size of the stock only signifies that the matrilineal clan structure was obviously at its basis, since, without the active involvement of an entire clan or *kula* such large herds could not have been managed.

Various studies by anthropologists give us a glimpse of the structure of gens or clans or kulas of the time. The exogamic kula identified by totems or *bali* were present within each endogamous tribe (or caste).

Syed Hassan's ethnographic studies from the Hyderabad Karnatak region speak of the Bedas being divided into 101 exogamous totemic clans.[125] Edgar Thurston and K Rangachari report of 13 balis among the Bunts of Dakshina Kannada,[126] 66 among the Kurubas,[127] 23 among the Madigas,[128] 12 among the Holeyas[129] and 50 among the Bakudas of Dakshina Kannada.[130]

The exogamic balis among the Holeyas are:

"Ane = *elephant*
Male = *garland*
Nerali = ***Eugenia jumbolana***
Hutha = *ant hill*
Halu = *milk*
Kavane = *sling*
Hasubu = *pack sack*
Mallige = *jasmine*
Tene = ***Setaria italica***
Chatri = *umbrella*
Mola = *hare*
Jenu = *honey."* [131]

It is evident that these balis kept dividing once after they were formed leading to the progressive addition of new balis into the tribe. From the exogamous balis of the Holeyas it maybe said that all of them, by the objects they signify, can easily be traced to the mode of hunting-food gathering. Again, most Madiga and Bunt balis refer to a similar culture-world. This only confirms Engels' periodisation for the start of the punauluan family.

All castes of Karnataka have reported their balis as being patrilineal in descent. But this in no way disputes the matrilineal origin of the bali since they have been recorded after the conversion of tribes into castes, and under the conditions of a patriarchal feudal order.

Yet, all the non-Brahmana castes of Dakshina Kannada and Uttara Kannada districts of Karnataka, just as those of Kerala, recorded balis under matrilineal descent, called in Kannada as the *aliyakattu.* This special feature of society of the Konkan coast which despite being feudal and patriarchic but responding to descent along the mother's line, is, as Kosambi observes, **due to the late transition to feudalism in the region** and the persistence of a pre-feudal trait well into the feudal period.

But despite the breaking up of the pairing family based on exogamous bali kulas within endogamous tribes of the period of pastoralism-primitive agriculture, and the creation of the patriarchal monogamous family, remnants of the ancient pairing family could be seen among a few oppressed castes of Karnataka.

Hassan writes that among the Bedas for instance, a *"widow is allowed to marry again, but not the brother of her deceased husband. She may however remarry the husband of her elder sister."* [132]

In this instance we get a glimpse into a fragment of the prehistoric past. While under normal conditions (of patriarchy and thus monogamy) the woman is married into the bali clan of her husband and thereby her's, she may, in case the condition of normality is upset by death of her husband, revert back to her original clan rejecting marriage with her husband's brother but accepting that of her sister's. There is, in this instance, in the form of a relic, a shred from the past, which is powerfully circumscribed by the parenthesis of patriarchy.

vii) From Protodravidian to Kannada

VP Alexeev says: *"I have distinguished three stages in the chronological dynamic of speech and language: (a) that of* ***Pithecanthropus****--words as designations of objects, passing only in separate cases into word-sentences, and dialogic speech; (b) that of Neanderthal man--modern or close to modern articulation, mastery of very simple grammar and syntax, development of monologic speech; (c) that of modern man--full mastery of modern articulation, further development of the structural categories of language, and a still on-going extension of vocabulary."* [133]

From Alexeev's scheme it is clear that by the time of the first evidence of human habitation in Karnataka, that is, of modern man, language had already developed.

But we can make only hazy conjectures about the languages that the palaeolithic and neolithic people spoke. Such an estimate would obviously have to rely on the nature of migratory movement, which, in the absence of any skeletal finds, itself remains speculative at present. We would like to however, rely on Stalin's categorisation in the development of language. At the stage of hunting-food gathering in Karnataka, there must have been not one but several languages on a clan basis or these having been replaced by a language for each different tribe.[134] It is however with the commencement of the neolithic period that we can make surer proposals on the question of language.

In India, the oldest phase of the neolithic period may be traced to the eighth millennium BC in the western regions of the Indus valley. From that period onward there is an unbroken sequence of development. The chalcolithic age commences about 5000 BC and lasts till 3600 BC. The early Harappan stage is fixed at between 3600 BC and 2600 BC and the mature Harappan at 2550 BC to 1800 BC. Thus it was from 2500 BC to 1800 BC that Indus civilisation flourished and it collapsed into regional cultures in the late Harappan stage starting from 1800 BC onwards.[135]

Based on the unbroken sequence starting from the neolithic period onwards well into the period of the mature Harappan, the existence in Baluchistan and adjoining areas in Iran and Afghanistan of the Northern Dravidian language--Brahui, and the absence of any reference to or archaeological remains of the horse which was introduced to India by the Aryans who started arriving from 1900 BC onwards, Asko Parpola concludes that **the Harappan was a non-Aryan civilisation whose people spoke a Dravidian tongue.**

Thus it appears that the development of a Dravidian language in the Indus valley commenced from around 7000 BC, and its script came into existence from around 2500 BC. The emergence of a Protodravidian language itself, we presume was the result of the fusion of different tribal languages.

The inauguration of the pastoral-primitive agricultural stage in south India by 2500 BC was obviously coincidental with the movement of Indus people at the stage of neolithism into the peninsular region. This influence could have resulted in the development of a southern neolithic phase of pastoralism-primitive agriculture. The onward movement of the Protodravidian language further south into Tamil Nadu and from then onwards the relatively higher insulation of Tamil Nadu to migratory physical and cultural influences from the north led to the preservation of Protodravidian to the greatest degree in the Tamil language among the southern branch of the Dravidian family of languages.

The contact of the Protodravidian language with the megalithic hunter-gatherers of the Krishna-Tungabhadra doab area of Karnataka must have led to the branched development of this Southern Dravidian variety in Karnataka. While it took at least 5,000 years for Protodravidian to evolve its script in the Harappan complex, the Tamil language which came to be written in 200 BC took 2,300 years, the Kannada language became literate in 430 AD taking nearly 3,000 years of development, Telugu which was first written in the seventh century AD took 3,500 years of development and Malayalam which assumed the written form in the twelfth century AD took 4,000 years to evolve.[136]

While it took 3,000 years of development before Kannada assumed a written form after its branching from Protodravidian it could surely have developed as a spoken language with an independent identity much earlier. Thus the period from the commencement of the neolithic or in other words, the stage of pastoralism-primitive agriculture, it may be fairly stated, was also the formative period of the origin of the Kannada language.

Kushalappa Gowda says: *"As a convenient explanatory formula, scholars reconstruct a hypothetical common parent for all the present Dravidian languages and call it Proto-dravidian. The various members of the Dravidian family are further subgrouped on the basis of certain linguistic features they exhibit. Thus, the Proto-Dravidian divides itself into three main branches, viz., (i) South, (ii) Central, and (iii) North Dravidian. The following are the list of the members of the Dravidian family:*

i) South Dravidian: 1. Tamil. 2. Malayalam. 3. Kota. 4. Kola. 5. Toda. 6. Kannada. 7. Tulu

ii) Central Dravidian: 8. Telugu. 9. Gondi. 10. Konda. 11. Peugo. 12. Manda. 13. Kui. 14. Kuwi. 15. Kolami. 16. Naiki. 17. Parji and 18. Gadbha.

iii) North Dravidian: 19. Kurukh. 20. Malto. 21. Brahui.

...Tulu is the first to branch off from the common group of South dravidian. Formerly it was believed that Tulu exhibited relationship with the Central Dravidian

languages like Telugu rather than with South Dravidian and scholars were hesitant to group it under the latter. Next is Kannada to break off from proto-Tamil-Kannada stage and so on, the hierarchical splitting moves from right to left in each family in the above list." [137]

Let us see what Parpola has to say on this question: *"...a reconstruction of the proto-dravidian mother language is...to a large extent possible, especially as Tamil, protected against foreign influence by other Dravidian languages, has been well preserved and possesses a rich literary tradition which is over 2000 years old. Father Heras, indeed, attempted reconstruction of proto-Dravidian (1953) which must be recognised though he was not quite successful in putting his theory into practice....*

The Dravidian solution [to the Indus script] is undoubtedly the most likely one suggested by historical linguists, although eminent linguists do not want to exclude other possibilities, including a total disappearance of the Harappan language. (Emenean, 1954; Burrow 1969)

It is now widely accepted that already the Rgvedic hymns contain loan words and even phonological and syntactic features which are borrowed from a dravidian language spoken in the Punjab and the Madhyadesa in the second millennium BC...these Dravidian speakers have gradually started speaking Indo-Aryan and abandoned their original language, but in the process their mother tongue affected the way in which they spoke the new language.

...I have tried to demonstrate that the long held views of an one-to-one connection between the advent of a megalithic culture and the advent of the Dravidian speakers to South India are untenable, and that a systematic integration of the whole sub-continental evidence gives further support of the Dravidian identity of the Indus language." [138]

Thus Parpola is looking towards an earlier date than the iron age for the advent of dravidian speakers to South India.

This is how Bridget and Raymond Allchin deal with the question: *"It has been suggested that the place names of Maharashtra show a substratum of Dravidian elements, and these we may expect to relate to an earlier culture phase.... We may therefore postulate that the original population of agricultural settlers was Dravidian speaking, and that the changes associated with the Jorwe period coincided with the arrival in the area of immigrants from the north, speaking an Indo-Aryan language. This language must have been the ancestor of modern Marathi.*

What is striking about the culture of the earliest settlements of the southern Deccan is their apparently independent ancestry. There is an extra-ordinary continuity linking even the earliest setlements with the whole subsequent pattern of life. It is still not possible to decide whether this culture arose in response to some external stimulus, and if so from what direction it came. The indications are that there was a strongly indigenous flavour from the start.... The conservatism of material culture continues to exert itself over long periods....

It has been claimed, though on not very solid grounds, that the earliest speakers of these languages [Dravidian] brought with them into peninsular India both iron *and the custom of making megalithic graves. In the light of archaeological evidence this appears to be extremely improbable. We know that for at least a millennium prior to the arrival of iron there were established settlements in Karnataka, and probably also in other parts of the peninsula, and these setlements show evidence of a remarkable continuity of culture. Many modern culture traits appear to derive from them, and a substantial part of the population shows physical affinities to the Neolithic people. In the light of all this it is difficult to believe that the Dravidian languages do not owe their origin to the same people who produced the Neolithic cultures there.*

There need not be any doubt that the several regional cultures which developed along the southern corridor are all reasonably closely related, that they had throughout a degree of interaction and probably originally a common language family, Dravidian...it cannot be overemphasised that in Karnataka, Maharashtra and the Southern Nuclear Region the settlements of the third-second millennia appear to be ancestral to those which we encounter from the beginnings of history onwards." [139]

The Dravidian family of languages therefore may be called the language of pastoralists-primitive agriculturists. Its various branches have developed into independent languages on a neolithic pastoral-primitive agricultural base. **No language of the Dravidian family rests on a hunting-food gathering social foundation.** The change in the mode of production also at the same time witnessed a transformation in the languages that the upper palaeolithic-mesolithic people of Karnataka spoke. **The formative period of Kannada, we may conclude, belonged to the neolithic-chalcolithic periods and by the start of the iron age, surely Kannada must have branched off completely from the Southern Dravidian subfamily and come of its own.** In this development of primitive Kannada the various tribal mesolithic languages were gradually assimilated by the initial Protodravidian; and it is on the one hand as a result of this branching off from Protodravidian and the amalgamation of the various tribal languages into one that Kannada could emerge. Kannada, since the time of its primitive existence in the iron age had already become a language understood not by one tribe or a few but by several, **thereby marking the beginnings of the Kannada nationality**.[140]

The drawing of the southern Mauryan boundary by 237 BC short of Tamil Nadu paved the way for the independent articulation of the Tamil language though only by relying on the borrowed Brahmi script of the Mauryans. Without the Mauryan (322-237 BC) and Satavahana (240 BC-250 AD) conquest, it may be fairly stated, that Kannada could well have witnessed much earlier written evolution and thus in a way articulated--as much the written word as the spoken--the transformation of Karnataka to civilisation.

viii) Formation of the Dravidian Race

Closely related with the development of language and culture is the movement of peoples, or in other words, race movements. While race movements are related to the development of language and culture, it would be wrong to equate the two. The two are related, yet they followed their own independent courses of development.

Among the best pictures we get of the racial make up of India is from the writings of SK Chatterjee, who in his approach digs deep, combines physical with cultural anthropology, and prehistoric archaeology with linguistics to develop a pretty comprehensive account. Basing on GS Guha's work, Chatterjee talks of six main races with nine subtypes for India:

1. The Negrito
2. The Proto-Australoid
3. The Mongoloid, consisting of:
    - i)Palaeo-Mongoloids of a) long-headed and
      b) broad-headed types
    - ii) Tibeto-Mongoloids
4. The Mediterranean, comprising:
    - i) Palaeo-Mediterranean
    - ii) Mediterranean, and
    - iii) the so-called Oriental type
5. The Western Brachycephals [short-headed] consisting of:
    - i) The Alpinoid
    - ii) The Dinaric and
    - iii) The Armenoid
6. The Nordic.[141]

Of these six racial types it may be said that Karnataka was inhabited by the Negrito, the proto-Australoid and the Mediterranean in the period of prehistory; with traces of the Nordic at the threshold of the transformation to history.

Of these, *"the Negrito is all but extinct on the soil of India. A small group of Negritos is still surviving in the Andamans.... The Negritos appear to have been suppressed and absorbed by other races which followed them, particularly the Proto Australoids."* [142]

Traces of the Negrito race have been identified among a few marginalised tribal groups in South India. *"The original Negrito speech of India, whatever it was, seemingly survives in Andamanese, which as a language or dialect group stands isolated. Owing to their very primitive state, the Negritos did not appear to have contributed anything of importance to the civilisation of India."* [143] Even those tribal groups with traces of Negrito features in South India do not retain any cognisable elements of their original speech.

"The Proto-Australoids appear to have come from the West, and have become characterized in India. They survive in a good many aboriginal peoples of present-day India, although more or less mingled with other peoples. A branch of the Proto-Australoids passed on to Australia in very ancient times, and the 'Austronesian' peoples (Indonesians, Melanesians and Polynesians) have a good deal of the Proto-Australoid element in them." [144]

The Protoaustraloid racial type displays a small stature, dark skin approaching black, wavy or curly black hair, long head, broad flat nose and fleshy protruding lips.

While Chatterjee feels that the Protoaustraloid peoples were responsible for the introduction of primitive agriculture in India, analysis of skeletal remains from Tekkalakota, T Narasipura, Piklihal and Brahmagiri from the neolithic phase onwards itself only reveal that the strict Protoaustraloid features had already been compromised and deeply influenced by the third racial type, the Mediterranean.[145]

The Mediterranean type are a medium to tall people, with a complexion ranging from dark to light olive brown, a long head and face, a narrow and relatively pronounced nose, black hair, eyes ranging from black to brown and having a slender build.

This has been Sundara's opinion on the question: *"If the racial types known from a few sites are representative of the region, then, it may be said that by about 2000 BC in South India there was a thick population consisting chiefly of two racial types: the Mediterranean and the Autochthonous Proto-Australoid....*

...a Mediterranean Proto-Australoid complex is existing since more than 5000 years in the South, and these Dravidoid stock distributed in the Iranian plateau and even Central Asia in pre-Bronze times spread eastwards, according to anthropologists, into India and the South. This racial type has been recognised in considerable number, in Mohenjodaro...and...Harappa." [146]

Excavations from the Sindhu valley have revealed the existence of both Protoaustraloid and Mediterranean types. Further, common words have been found to exist between the West Asian Elamite and Sumerian languages of the Mediterranean region.

It is possible that the emergence of Protodravidian language in the Sindhu valley was a result of the combination of these Mediterranean languages over an Austric lingual substratum.

The Nordic Indo-Aryan speaking group entered India at the late Harappan phase, i.e., 1900 BC and seem to be *"characterised by features of the Eurasian Steppelands."* [147] The Kodavas are said to carry features of this Nordic type. Apart from them the Nordic feature has entered Karnataka in the final years of prehistory and there has been a greater scope for its entry in the historic period, but already in a compromised form and in relatively few numbers. Thus the Nordic element in the racial make up of South India in general and Karnataka in particular is quite subdued.

The location of this pattern of migratory movement in Karnataka starting around 40,000 years BP is fraught with certain gaps and challenges.

Firstly, the absence of any skeletal remains form the palaeolithic and mesolithic periods leaves us with merely speculative analysis of the Negroid element in the composition of the palaeolithic culture. Secondly we are not sure if the mesolithic period was not already mingled with a Protoaustraloid element.

Attempts to equate the Protoaustraloid element with the neolithic period of Karnataka as is done by SK Chatterjee is faced with contradictory evidence. The first skeletal remains of Karnataka coming as they do from the neolithic period, do not express Protoaustraloid features in an exclusive but rather in a combined state with the Mediterranean. Thus Malhotra who studied the remains form Tekkalakota concludes that the people belonged to a *"Mediterranean proto-Australoid complex."* [148]

Sundara sums up the evidence in the following manner: *"So far as the archaeological evidence is concerned, they suggest the appearance of a sudden full-fledged* *neolithic economy in the South and that the Neolithic culture is not entirely locally evolved and developed. The Neolithic culture appears to be a product of the external stimulus and the influenced local Late stone Age people probably represented by the Dravidoid and the autochthonous proto-Australoid, respectively. In fact, in the recent explorations of the Krishna-Tungabhadra valleys by me, it was clearly evident that the neolithic culture had diffused along the Krishna valley, eastwards, from about 2200 BC.*

It is noteworthy that the neolithic sites of the Southern Complex, more or less, cover the areas of the present Dravidian speaking peoples.

Thus linguistically, anthropologically and archaeologically, it is most probable that the neolithic people of South India were Dravidian speaking people who came from the North by land and probably by the West Coast as well as evidenced by the Neolithic sites in Nilaskal in the Western Ghat region." [149]

From this evidence we may conclude that the Protoaustraloid racial element was already existing in a combined form with the Negrito which had already been by and large absorbed on the eve of the neolithic. The Negrito element was perhaps subdued in this new racial complex due perhaps to its small number at the time of the Protoaustraloid arrival. With the commencement of the neolithic, the Mediterranean element intrudes into the already amalgamated Negrito-Protoaustraloid type. But the Mediterranean element itself, coming to the South after at least 3,000 years of combined existence with the Protoaustraloid in the Harappan valley was not in its pure form but already an amalgam. From 2500 BC, a fusion of the Negrito-Protoaustraloid with the Mediterranean-Protoaustraloid commences and yields by the time of the arrival of the Nordic element at the turn to the iron age to a new racial type called Dravidian or so as not to confuse it with the language that goes by the same name, Dravidoid. **Thus we may conclude that while the Harappan valley contributed to the creation of a Dravidian language identified by archaeolinguists as Protodravidian, peninsular India was the region for the emergence of a new race called Dravidian and identified by physical anthropologists as Dravidoid.**

The Dravidoid or Dravidian race thus came to possess the following features: long headed, short to medium stature, wavy to straight hair, black to brown eyes, flat to pointed nose and from dark to olive skin. In short the Dravidoid which later even absorbed some Nordic elements was the result of centuries of mutual intermixing, a literal hybrid.

12 skulls and an assortment of bones from Brahmagiri studied by Sarkar towards the end of the prehistoric period led him to conclude, in the words of BK Gururaja Rao, that: *"...there is enough evidence to indicate a case of hybridisation, slender and robust individuals being found in the same families...."* [150]

In fact skeletal and cranial remains of the people from the neolithic period onwards had already begun to reveal multiple features ranging from Protoaustraloid to Mediterranean from the same spots. In the iron age common burial pits revealed similar diversity of traits. Thus BK Gururaja Rao says: *"...by that time the hybridisation of the population was already far advanced and attempts at separating the individu-*

alistic ethnic traits and identifying certain culture societies may not be very fruitful."[151]

Further, Kennedy has found *"a high degree of variability of cranial form...in megalithic populations."* [152]

Therefore it may be said that the Dravidian race, by relying on a Negroid-Protoaustraloid foundation and intermixing with the Mediterranean trait and much later with traces of the Nordic was evolved indigenously, the Protoaustraloid and Mediterranean aspects being the most important in the Dravidoid amalgam.

In Sundara's words: *"From the present meagre evidence from the two cultural levels: the Neolithic and the Megalithic, it appears provisionally that while the people of Australoid and Mediterranean which has been designated as 'Dravidoid' racial types were widespread in the Deccan and South India at least from the Neolithic times onwards, there was perhaps the intrusion of an alien people represented by brachycephals having affinity with the South-Indian stock known only from the megaliths, who probably introduced the practice of erecting tombs of huge rough stones in the lower Deccan."* [153]

Hence, we may say that **the Dravidoid type is characterised as a genre**, as a broad spectrum race possessing not one but a range of features for each part of the human physical structure. Within individual families each child carries a different combination of these features, quite often defying the traits of their parents. The Dravidoid indeed is a true hybrid. The development of an indigenous Dravidian race as distinct from the Dravidian family of languages is established by the fact that the north western Brahui speaking people resemble not the Dravidian race but their Central Asian cousins.

ix) Preconditions for the Rise of Classes and the State

The iron age is the ultimate period of prehistory. With the arrival of iron, ground is created for the transformation to civilisation says Engels.[154]

The knowledge of iron use introduces certain significant changes in the pastoral-primitive agricultural social formation which contributes to the cleavage of society into classes and the rise of the state.

The knowledge of iron, as we have seen, cut through the horizons of the chalcolithic society. All areas of Karnataka came to be settled with human habitation. In the words of Engels, this meant that there was a *"...clearance of forest and their transformation into arable and pasture land...which would have been impossible without the iron axe and the spade."*[155]

The spread of agriculture with the use of the iron hoe, the pick and the spade, and at the same time the construction of tanks for irrigating this land raised the material standards of society in general and gradually the wealth of a section in particular as seen in the inequalities in grave goods of particular megalithic burial sites. At Brahmagiri a coulter was also found, which only indicates that agriculture could slowly, before the plough as such had arrived, create a narrow surplus, thereby providing the material basis for social groups such as artisans, warriors, priests and traders to rise. In other words, there was a visible stratification that was taking place, a trend which countered the laws of existence of the clan based primitive communal society. After a clear analysis of the typology of iron tools between the northern and southern parts of India, it would not be wrong to conclude as Leshnik does of a trade in iron products; the southern enclave situated in the iron ore and gold yielding zone of Karnataka.[156]

In fact MK Dhavalikar in his monograph, goes to the extent of saying: *"The gold ornaments--spiralled like the latter day sarpakundalas--from Daimabad [in Maharashtra] and Tekkalakota are so identical that they were perhaps made by the same goldsmith."* [157]

On the basis of these three factors, exclusive to the iron age:

i) an increase in the material standards of society as a result of improved agriculture and the capacity to create a marginal surplus;

ii) the extensive production of iron implements; and

iii) the start of a widespread network of trade in iron, gold and related goods; one is led to rightly ponder by raising the following question: *"Did not this new iron-technology bring in changes in material culture with the introduction of more efficient modes of production and the consequent changes in social formation introducing stratification...?"* [158]

This growing stratification of the primitive communist order could not have and did not proceed smoothly. It was characterised by war. Let us look at a generalisation that Ardeas Skybreak makes in this regard before proceeding with war in iron age Karnataka.

She says: *"Less tied down by the young, the men would also range farther afield than the women and therefore have greater occasion to explore new areas and encounter other groups. Men therefore would likely have been the most common initiators of exchanges between groups; whether these exchanges would be friendly or not would depend on any number of circumstances. Any given encounter, of course, need not have been antagonistic, and friendly coexistence and cooperation must indeed have been commonplace. But there must have been many situations where, given the generally quite limited productive capacities and, on the other hand, the new found abilities to store and accumulate surpluses, discrepancies in material accumulation would have taken on more significance. Such* ***unevenness****, rather than some precise degree of accumulation, is likely to have been the most important factor spurring the early development of large-scale social divisions in human societies. While again, no given encounter need have been antagonistic, the point is that* ***now****, when antagonisms did flare up for whatever reasons (personal disagreements, or increasingly, conflicts rooted in uneven material accumulation or different concepts of "ownership") there* ***would*** *be something to plunder (and to defend!), and the material basis would exist for peoples actions to exacerbate even further the differences in material reserves between them--to the benefit of some and to the detriment of others."* [159]

In other words, war was clearly becoming a motivation for economic achievement. Excavations from the various sites confirm the growing preoccupation of iron age Karnataka with war.

Bridget and Raymond Allchin's classification of the third phase of the chalcolithic age is based on evidence during this phase, i.e., 1700-1000 BC, of antennae swords and daggers of copper. These weapons were found at Maski and Kallur of Raichur, among others.[160]

It must be remembered that daggers and swords representative of the period of barbarism, unlike the bow and arrow representative of the period of savagery **were used not as hunting tools but as weapons of war.**

This tendency of making copper weapons that was noticed at the last phase of the chalcolithic period only picks up with accumulated vigour with the onset of the iron age. It would not be wrong to say that **the iron age was an epoch of war if the chalcolithic was an epoch of peace.**

The earliest site of the iron age, Komaranahalli, yielded swords and spear-heads.[161]

In all the megalithic sites that have been excavated in Karnataka one finds that **weapons predominate in variety and number over implements and other funerary articles** placed beside the dead. SB Deo's analysis of data from iron age sites tells us *"...that agricultural tools (hoes and sickles) are only 6 out of 44 [from Borgaon], whereas tools of offence like spikes, axes, trident and other objects account for nearly 77% of the total collection. At Maski, of the 32 objects of iron only one is a sickle blade and that too fragmentary. Excepting a bangle, a ferrule and a chisel, the rest are tools of offence."* [162]

Similarly a breakup of items excavated from Brahmagiri shows:

Tanged knives	13
Blades	6
Lances	2
Sword	1
Arrowheads	2
Spears	3
Chopper	1
Total	44

These 44 items constituted 63% of the total number excavated.[163]

This increasing tendency of society to be embroiled in warfare is revealed not only by the excessive number of weapons from sites, but is also described by the rock art of the time.

Of the rock paintings from Hire Bankal of Raichur district, there are scenes of men holding weapons as if proceeding for war.[164]

Marx says that piracy, trade and the plunder from colonies constituted important sources for the primitive accumulation of capital catalysing the transition to capitalism and heralding the rise of a bourgeois order. Similarly, **war waged by the iron using tribal oligarchs which laid claim to the meagre property of the vanquished tribes stimulated the rise of classes in prehistoric society and contributed to the formation of class society in Karnataka.**

39. Domestic iron objects and iron agricultural implements excavated from megalithic sites in Karnataka.

In fact RS Sharma's detailed analysis of Aryan tribal institutions such as the Sabha and Samithi also demonstrates a parallel development taking place among the Indo-Aryans of the Western Ganga plains.[165] Talking of the importance of war, RS Sharma says: *"War was an important source of livelihood, and booty production was the only other important source of subsistence in addition to what they obtained from cattle rearing."* [166]

The only difference between South India of that time and the north is that while the Indo-Aryans have left us with their early Vedic verse, as a source to deconstruct their lives; the iron age warriors of the south have left behind thousands of megalithian sepulchres which chant a silent dirge to their war-like times.

This general direction towards militarisation and thus of tribal oligarchy obtained a territorial dimension with the growing use of horse from the iron age onwards.

First evidence of the horse in Karnataka comes merely 200 years after the late Harappan stage or in other words, with the collapse of Harappan civilisation from 1800 BC. *"According to Parpola the collapse was due to a combination of several factors,*

40. Objects excavated from megalithic sites in Karnataka. A. Iron objects: horseman's equipment. B. Gold diadems. C. Etched carnelian and terracotta beads.

such as the over-exploitation of the environment, drastic changes in river courses, series of floods, water logging and the increased salinity of irrigated lands. Finally weakened cities would have become easy victims of the raiders from Central Asia, whose arrival heralded a major cultural discontinuity in South Asia." [167]

We cannot rule out, in addition to these several factors, the role of internal rebellions in weakening the ruling classes of Harappa. It was only after the raiding Aryans crossed over the Sindhu valley that the horse had entered Indian frontiers for the first time in history.

It must be said, without the least hesitation, that the arrival of the horse opened up India. It was on its back that India's civilisation was carried and the Magadhan empire was built. Without the horse territorial conquest would have remained a dream.

Radiocarbon dates of horsebones and teeth tell us that by 1600 BC the horse had rode down to the southern tip of Karnataka, i.e., to Mysore district. Next, from the same district the horse was again traced to 1300 BC from another site.[168] From then on, the occurrence of the horse, coinciding with the period of megaliths and iron age becomes more and more frequent. Thus **the arrival of the horse to Karnataka coincides with the manufacture of the first new weapons of war** in the late chalcolithic phase itself, the copper dagger and antennae sword being examples.

Iron age rock paintings from Hirebankal area show us men on horseback charging with lances.[169] Another painting from Maski depicts horseriders with metal weapons.[170]

41. Iron objects of domestic use excavated from megalithic sites. Nos 4 and 5 are trishulas.

The increasing importance for war should obviously have created, towards the end of the iron age prehistoric period or by the third century BC, a new strata of military leaders and soldiers among the men of some of the dominant tribes that existed in Karnataka. It was ultimately on these three elements, iron weapons, war and horse that the state came to be founded by Satavahana times not only as an instrument for external conquest but also as an institution arising on the debris of primitive communism, pastoralism-primitive agriculture and tribal oligarchy and serving the rule of a class of exploiters.

42. Iron weapons excavated from megalithic sites in Karnataka.

43. Iron arrowheads and daggers from Komaranahalli, Chitradurga district.

S Nagaraju's perceptive article analysing this transition from prehistory to history says: *"Some of the Megaliths which are datable to the pre-Mauryan period, yielding mostly iron weapons, are indicative of the existence of a class engaged in war or police functions. Anthropologists feel that war and police functions are the central activities of the state-machine. If so, is it possible that some type of political organisation--the tribal-state, or the early loosely-knit state had already begun in Karnataka in pre-Mauryan times?"* [171]

We would however like to clarify that pre-Satavahana Karnataka starting from 2500 BC onward based on pastoralism-primitive agriculture was particularly from the iron age phase starting 1200 BC, not yet a class divided society and thus did not yet possess a state. Yet this period, characterised as a tribal oligarchy and coming in the upper stage of barbarism already tended to display elements of the future society that it was to procreate such as stratification, the growing division between mental and manual labour, the rise of warrior ganapathis and patriarchy. The growing incidence of war by itself does not imply the existence of a state. The state can only be the result of the rise of a class of exploiters. Thus this period may be characterised as the period of tribal oligarchy. The society of this time through iron weapons, war and the horse based on an increasingly stratifying economy created the preconditions necessary for the rise of class society and its instrument of oppression, the state.

It was in this period of transition that patriarchal features arose. Patriarchy as a social institution not only represents the subjection of woman to oppression in its overt sense but in its covert and fuller sense therein, it is a means for the rise of a class of exploiters for the first time in society.

The rise in warfare had already stamped the iron age phase of pastoralism-primitive agriculture with all the features of a tribal oligarchy. The growing evidence of war created a counterpoint to the matriarch sorceress. A patriarch chieftain hailed for his military exploits and beginning to live by it emerged. In these wars between tribes (at different levels of social development) the iron users and horse riders proved to be victorious. With the progress of war it obviously became an economic activity and a source of wealth for the victorious tribes. But this new found wealth whether in the form of cattle and male and female slaves had to be divided. This new wealth became the property of the men and it was this new wealth of slaves by war which made wealth reproduce itself, that came to alter the privileged position of the chieftain of the tribe as an owner and keeper of slaves. Engels speaks of this process thus: *"But to whom did this new wealth belong? Originally undoubtedly to the gens. But private property in herds must have developed at a very early stage...on the threshold of authenticated history we find that everywhere the herds were already the separate property of the family chiefs, in exactly the same way as were the artistic products of barbarism, metal utensils, articles of luxury and finally human cattle--the slaves.*

For now slavery was also invented. The slave was useless to the barbarian of the lower stage.... The [captured] men were either killed or adopted as brothers by the tribe of the victors. The women were either taken in marriage or likewise just adopted along with their surviving children. Human labour power at this stage *yielded no noticeable surplus as yet over the cost of its maintenance. With the introduction of cattle breeding, of the working up of metals, of weaving and finally, of field cultivation, this changed. Just as the once so easily obtainable wives had now acquired an exchange value and were bought, so it happened with labour power, especially after the herds had finally been converted into family possessions. The family did not increase as rapidly as the cattle. More people were required to tend them; the captives taken in war were useful for just this purpose and, furthermore, they could be bred like the cattle itself.*

Such riches, once they had passed into the private possession of families and there rapidly multiplied, struck a powerful blow at a society founded on pairing marriage and mother-right gens. Pairing marriage had introduced a new element into the family. By the side of the natural mother it had placed the authenticated natural father.... According to the division of labour then prevailing in the family, the procuring of food and the implements necessary thereto, and therefore, also, the ownership of the latter, fell to the man; he took them with him in case of separation, just as the woman retained the household goods. ***Thus according to the custom of society at that time, the man was also the owner of the new sources of food stuffs--the cattle--and later, of the new instrument of labour--the slaves."***[172]

Therefore, as wealth increased, it, on the one hand, gave the man a more important status in the family than the woman, and, on the other hand, created a stimulus to utilise this strengthened position in order to overthrow the traditional order of inheritance in favour of his children.[173]

Putting it in RS Sharma's words: *"Perpetual war and pastoralism brought the patriarchal element to the forefront and relegated women to a lower status."* [174]

Thus the rise of patriarchy and inherent in its institutionalisation, the change from matrilineage to patrilineage to serve the inheritance and growth of private property was already marked, we presume, in this period of tribal oligarchy. The origin of patriarchy in the iron age of Karnataka only strengthened the overthrowal of the primitive clan based communal pastoral-primitive agricultural system.

It was at a time when all the features for the making of class society were developing--stratification, and thus the development of class divisions; the state, and thus the power of the exploiters to exercise their exploitation and conquest; trade, and thus the quicker and more rapid fall of the natural economy of primitive communism and the emergence of classes; patriarchy, and thus the overthrow of mother right and the institutionalisation of private property through the monogamous family; territorial thrust or the formation of kingdoms through war and pillage; written language, and thus the means to administer a kingdom, manage a state pursue trade and create a philosophy for its justification; religious belief or the creation of a false consciousness, so that the ideological weapons for exploitation may be developed--that Karnataka came under the rule of Chandragupta Maurya. The period of nearly a century, starting from the rule of Chandragupta Maurya to that of his grandson Ashoka (325-232 BC) influenced the transformation of Karnataka to civilisation. Yet, **Magadhan rule, stopped short of undertaking the transformation of Karnataka society.** Karnataka was on its periphery and it was for iron ore and gold that the Mauryans came to Karnataka. Ashokan edicts decorated those centres that fell in the neighbourhood of the gold mines of Raichur. The Mauryans infused new elements hastening the transformation of Karnataka society and as a result of which, the development of several local institutions of class society came to receive a northern pigmentation. But as we said **all these hastened, but did not yet transform.** The transformation itself had to wait till the collapse of the Mauryan dynasty and the rise of the Satavahanas (240 BC-250 AD). **It was under the nearly 500 year rule of the Satavahanas that Karnataka underwent transformation into a class divided society and passed the threshold of history.** The choppers and hand axes, the blades and burins, the urns and megaliths, the sorceress and her magic--all became ashmounds of antiquity. Prehistory had ended. History had begun. Primitive communism had run out after a long innings to class division. The new society was cast by a new spell. Naked greed would hence onward become the moving spirit, the pursuit of wealth the grandest design. Slavery, bondage and wage labour would be yoked to the history of humankind.

5. PROBING PREHISTORY

There is every possibility that south India may come up with further revealations of its prehistory, with the advance of a more rigorous and imaginative excavationary effort. These finds may push back the current 40,000 BP starting point in accounts of Karnataka history and bring it closer to the Adicahanallur finds of Tamil Nadu of 70,000 BP. The strength of such an hypothesis, in the absence of any real finds as yet, may be derived from the fact that the Indian land mass formed a bridge for the Protoaustraloid migration into South East Asia which finally ended course as the Australoids of Melanesia, Polynesia and Australia. Southern penetrations forming Indian Protoaustraloidal deviations from this north and central Indian highway may therefore be anticipated. Could this not also imply that the Negroids, forming the primeval inhabitants of India and who are generally known to have preceded the Protoaustraloids, left their own imprints; thereby predating the entire course of south Indian prehistory?

Yet, it is the discovery of real material that constitutes the practical starting point, all else serving as hypothesis in anticipation of such archaeological matter. Hence it is the palaeolithic period from 40,000 BP that an account of humankind in Karnataka is compelled to commence.

Measure it by any yardstick, the significance of such an account is stolen by the nuclear region of the south--the Krishna-Tungabhadra doab comprising about 10 districts of Karnataka and Andhra Pradesh. This constitutes the prehistoric core of the south and it is from humankind's foothold here that there is a radiation across the peninsula. The ecological factors which created this stone age eden must always be emphasised, since, bereft of its conducive factors human society at its level of primitive existence could not have survived.

This stone age core demonstrates a resilience across several hundred millennia. There is a continuity of human habitation, a habitation which transforms from one level of material existence to another--from the palaeolithic into the mesolithic and neolithic; and then into the copper and iron ages; from hunting-food gathering to pastoralism-primitive agriculture. Towards the final centuries of prehistory this nuclear region came, it could be presumed, under Sindhu civilisational influences--either from its gold or for having provided residence later to the agricultural communities that migrated south after Sindhu's collapse as a civilisation from 1800 BC onwards.

The discovery and use of iron from as early as 1200 BC onwards which spells the significance of this core region in the development of tribal oligarchism, makes it parallel similar development among the Indo-Aryan tribes that were on an eastward course in the upper reaches of the Ganga valley. Thus while this nuclear zone matched the north in developing protoclass oligarchic features in the post-Harappan period, the transition to class society was delayed. If the north saw the rise of class society by the sixth century BC, Karnataka experienced this transition only in 250 BC--more than three centuries late. Not only was this transition to protofeudalism belated in Karnataka, but it was achieved by the mediation of a northern factor--the plough: society's first

44. Exchange network in the chalcolithic period with western India.

sure means of surplus production; being brought rather than its being discovered here. The question which crops up therefore is: why did the southern nuclear zone lag behind? Tagged to it, one may further ask: what intrinsic factors delayed this transition? Why did a Karnataka which developed iron-based tribal oligarchy by 1200 itself, trail behind in social advancement over the central Ganga plain which experienced its tribal oligarchic phase much later than that of the former?

45. Exchange network in the chalcolithic period in the Deccan.

For a short answer to this many shaded question we may say: the motivation to transform was yet inadequate.

To make this short answer long we have to delve on the nature of the soil where agriculture was practised by Karnataka's iron-using folk. Black cotton soil, being fine and powdery when dry becomes a sticky dough when moist. With the passing of the monsoon the soil quickly looses its moisture and tends to crack up. These fissures run a few inches deep. This cracking tends to loosen and turn the top soil making artificial digging and furrowing with the hoe and pick quite unnecessary. Dhavalikar, speaking of the black cotton soil region of Maharashtra has made a valid observation in this regard: *"...it is doubtful if wooden ploughs would have been effective in ploughing the hard, compact black cotton soil in Maharashtra. The adage goes that the black cotton soil ploughs itself because it develops large wide fissures in summer; nature thus completes the job of the circulation of nitrogen. Even at present, the land where* ***jowar*** *is grown is ploughed only once in three years."* [175]

Therefore **it was this natural propensity of black soil to cultivate itself, that delayed the early use of the plough, making Karnataka's preplough iron age exceptionally prolonged and permitting the time for external mediation to effect Karnataka's transition to class rule.** This delayed transition is true of not just Karnataka but the entire black soil Deccan plateau to which Maharashtra and Andhra Pradesh also belong. The Satavahana kingdom, it could therefore be said, was basically a black soil empire--introducing plough agriculture and class society to the Deccan plateau.

Despite the delay in this transition to civilisation, it must not be forgotten that this core region had an important role to play in the rise of the Satavahana empire. There still is some confusion on the background of the Satavahana kings. While some claim they are Telugus, Kosambi says they hailed from Bellary. Andhra or Karnataka, one thing is certain: they hailed from the same prehistoric nuclear region which was breaking up into classes under the oligarchic weight of iron.